WM-702/F702

SERVICE MANUAL

Photo : WM-F702

US Model
WM-F702
AEP Model
UK Model
E Model
WM-702
WM-F702

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
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SPECIFICATION

Radio section (WM-F702)
Frequency range
US model : FM : 87.9–107.9 MHz
AM : 530–1,670 kHz
AEP, UK model : FM : 87.5–108 MHz
AM : 531–1,602 kHz
ET, AUS model : TV : 1–12 CH
FM : 76.0–90.0MHz
AM : 531–1,629 kHz

Antenna
FM : Headphone cord antenna
AM : Built-in ferrite bar antenna

Tape player section and general
Frequency response (DOLBY NR off)
15–18,000 Hz
Output
Headphones (PHONES/REMOTE) jack
load impedance 8–300 Ω
Power output
5mW+5mW at DC operation, 16 Ω
Power requirements
1.5 VDC
Rechargeable battery
One R6 (size AA) battery
Battery life

Battery	Playback	Radio Reception (WM-F702)
Rechargeable NC-6WM fully charged	Approx. 3 hours	Approx. 4 hours
Sony SUM-3 (NS)	Approx. 1.5 hours	Approx. 2.5 hours
Sony AM3 (N)	Approx. 6 hours	Approx. 10 hours
Rechargeable NC-6WM with Sony AM3 (N)	Approx. 10 hours	Approx. 12 hours

For maximum performance we recommend the use of alkaline batteries.
Dimensions
WM-702 : Approx. 104.8×72.2×19.1mm (w/h/d)
WM-F702 : Approx. 104.8×72.2×23.3mm (w/h/d) excl. projecting parts and controls
WM-702 : Approx. 106.4×74.6×20.7mm (w/h/d)
WM-F702 : Approx. 106.4×74.6×25.4mm (w/h/d) incl. projecting parts and controls
Weight
WM-702 : Approx. 150g
WM-F702 : Approx. 190g incl. rechargeable battery, excl. other accessories
Accessories supplied
Battery case (1) Battery charger (1)
Rechargeable battery (1) Lithium battery (WM-F701 ONLY, 1)
Stereo headphones with remote controller (open-air type, 1)
Plug adaptor (1) Carrying case (1)
Design and specifications subject to change without notice.
Note : AUS : Austrarian model

Model Name Using Similar Mechanism	WM-701C
Tape Transport Mechanism Type	MT-WM702-17

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WM-702 : CASSETTE PLAYER
WM-F702 : RADIO CASSETTE PLAYER

SONY®

MICROFILM

SECTION 1
SERVICING NOTE

This set detects reel rotation by PH701 (photo sensor). Reel rotation cannot be detected when the system control board is removed, because PH701 is mounted on the system control board. As a result, the auto-off circuit and tape end detection will misoperate. And, up and down of head and power supply of playback circuit cannot operate when the system control board is removed, because S703 (play switch) is mounted on the system control board. (S703 is linked to on and off of the plunger solenoid.)
Therefore, operation check of the mechanism deck and voltage check can be performed by the method shown below.

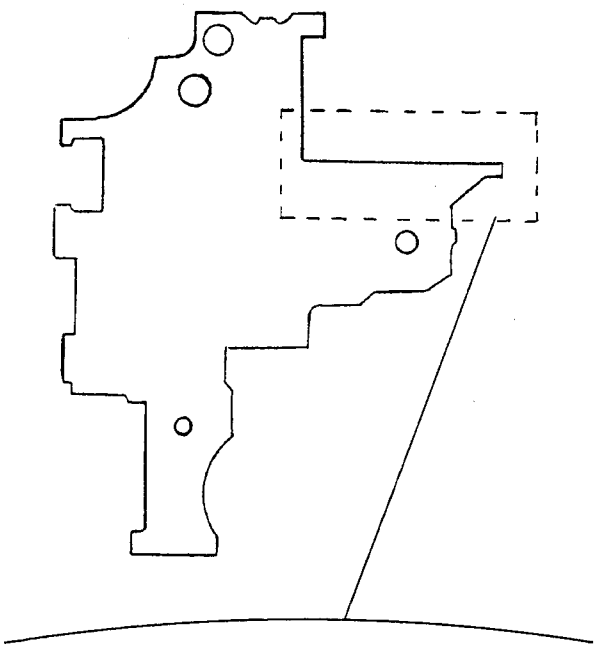
FF/REW mode

1) Apply the square wave signal to the PH701.
2) Press the ⏩ or ⏪ key.

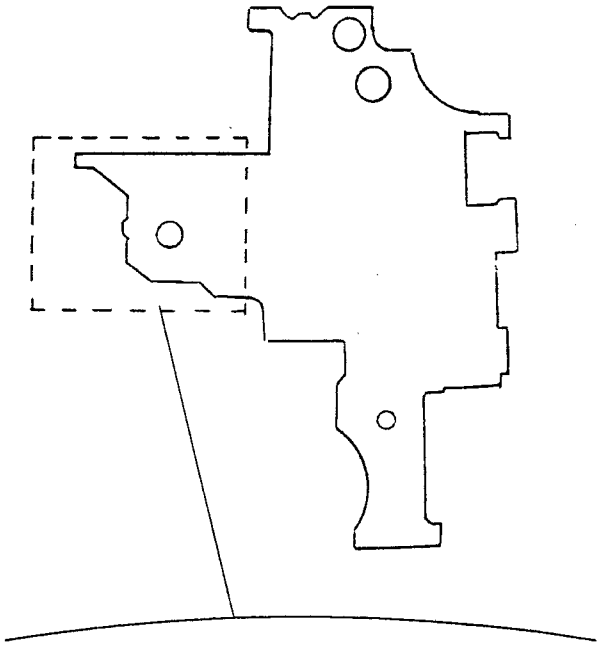
PLAY mode

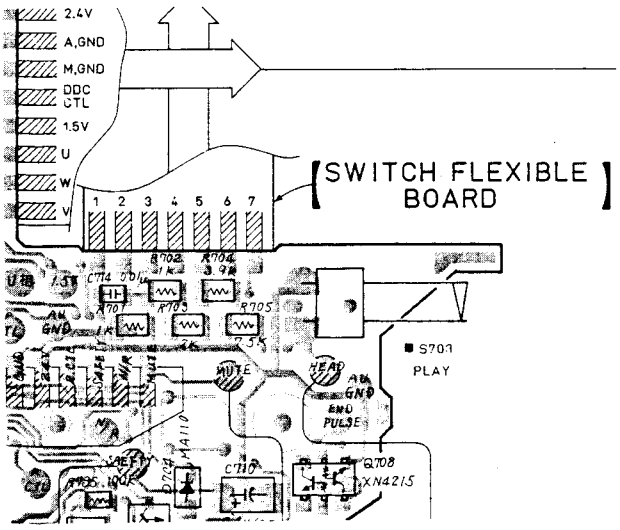
1) Apply the square wave signal to the PH701.
2) Press the ▶ key.
3) Turn on S703 a few seconds later.

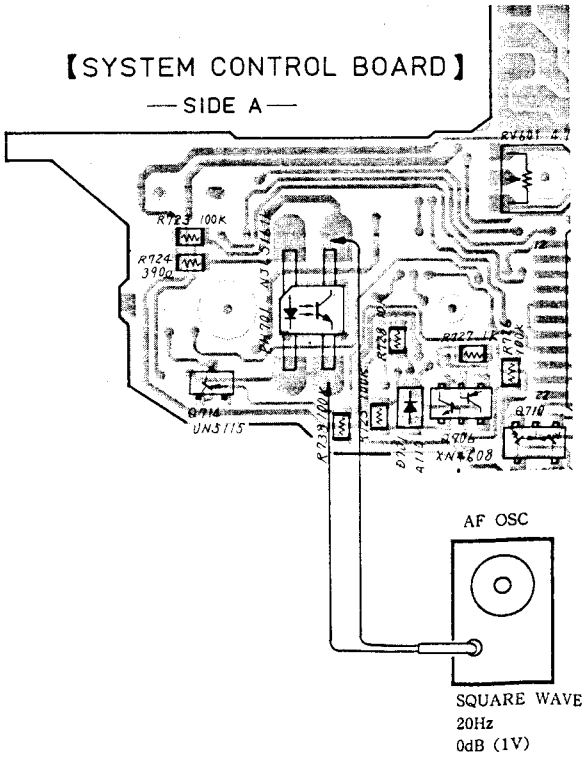
—System Control Board (side B) —



—System Control Board (side A) —







About the headphones with remote controller

- The supplied headphones with remote controller is to be used only with this unit.
- This unit cannot be operated with headphones supplied to other models though they have the same plug as the headphones supplied to this unit.
  Also other models cannot be operated with the headphones supplied to this unit. (But sound can be heard in either case.)

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270℃ during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

WARNING !!

ADVARSEL!
Lithiumbatteri – Eksplosionsfare
Udskiftning må kun foretages af en sagkyndig, og som beskrevet i servicemanualen.

LITHIUM BATTERY

SHOULD ONLY BE CHANGED BY TECHNICAL PERSONNEL. THERE IS A RISK FOR EXPLOSION AT A WRONG HANDLING.

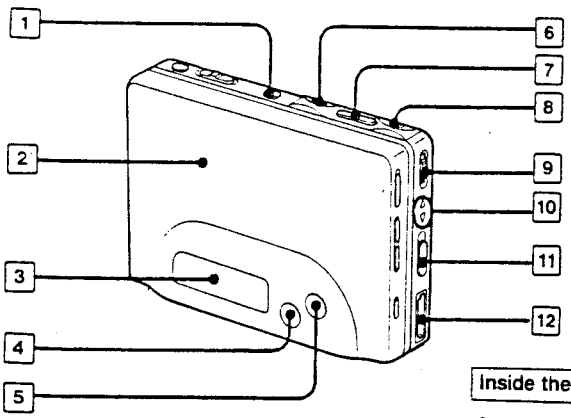
"Batteriet må kun udskiftes med et batteri af samme fabrikat og type".

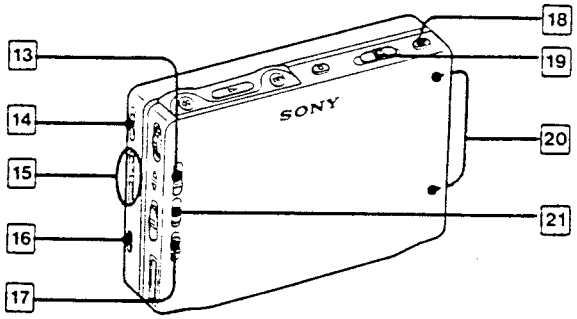
Because of the risk for explosion the battery must be replaced with the same type and manufacture.

SECTION 2
GENERAL

LOCATION AND FUNCTION OF CONTROLS

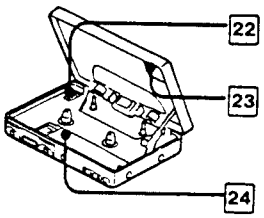
Unit

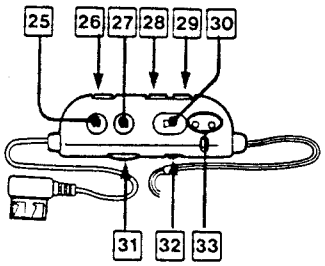




Stereo headphones with remote controller

Inside the unit





NOTE :
- Illustration : WM-F702
- 3 – 5, 14 – 16, 25 – 26 : WM-F702 ONLY

1 ■ STOP/RADIO OFF button
2 Cassette holder
3 Display window
4 Ⓣ PRESET TUNE (preset number select) button
5 Ⓑ RADIO ON/BAND (radio on switch/band select) button
6 ◀◀ (fast-reverse) button
7 ▶ PLAY/DIR (playback/tape transport direction change) button
8 ▶▶ (fast-forward) button
9 VOL (volume) control
10 REV/FWD BATT (tape transport direction/battery) indicator
11 EX DBB (dynamic bass boost) (MEGA BASS) selector
12 PHONES/REMOTE (headphones with remote controller) jack
13 DOLBY NR (Dolby noise reduction) (ON/OFF) selector
14 FM ST/MONO (FM stereo/monaural) selector
15 SCAN +/– (tuning) button
16 ENTER button
17 MODE (tape transport) selector
18 OPEN button
19 HOLD switch
Slide the HOLD switch in the direction of HOLD to avoid accidental operation of the unit and remote controller. Even if the switch is slid to HOLD on the unit, you can operate the unit with the remote controller, and even if the switch is slid to HOLD on the remote controller, you can operate the unit on the buttons on the unit.
20 Battery connecting points
21 TAPE selector
22 RELEASE (plug release) switch
23 Battery compartment for lithium battery
24 Battery compartment for rechargeable battery
25 Ⓑ RADIO ON/BAND (radio on/band select) button
26 Ⓣ PRESET TUNE (preset number select) button
27 ■ (stop/radio off) button
28 ◀◀ (fast-reverse) button
29 ▶▶ (fast-forward) button
30 ▶ (playback/tape transport direction change) button
31 VOL (volume) control
32 HOLD switch
33 REV/FWD indicator

SECTION 3
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denaturedalcohol-moistened swab :
   playback head rubber belts
   capstan idlers
   pinch roller
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage (1.3V) unless otherwise noted.

Torque Measurement

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	22–38g · cm 0.31–0.52 oz · inch
FWD Back Tension		1.0–3.0g · cm 0.02–0.04 oz · inch
REV	CQ-102RB	22–38g · cm 0.31–0.52 oz · inch
REV Back Tension		1.0–3.0g · cm 0.02–0.04 oz · inch
FF	CQ-201B	more than 50g · cm more than 0.7 oz · inch
REW		more than 50g · cm more than 0.7 oz · inch

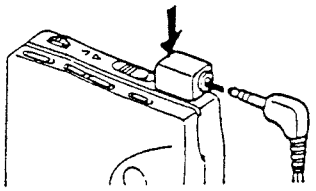
Tape Pulling Force Measurement

Mode	Tension Meter	Meter Reading
FWD	CQ-403A	more than 50g more than 1.77 oz
REV	CQ-403R	more than 50g more than 1.77 oz

3-2. ELECTRICAL ADJUSTMENTS

PRECAUTION

1. Power supply voltage : 1.3V
2. Switch position
   FM MODE switch : ST
   DOLBY switch : OFF
   DBB switch : OFF
3. For electrical adjustments, use the supplied plug coversion adaptor (Parts No. 1-563-133-11).



Cassette Section

TEST TAPE

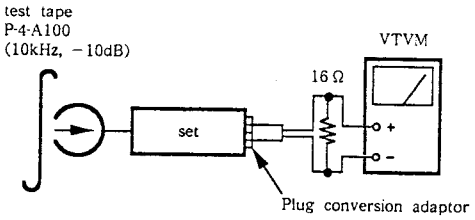
Type	Signal	Used for
WS-48A	3kHz, 0dB	Tape Speed Adjustment
P-4-A100	10kHz, −10dB	Playback Head Azimuth check
P-4-A063	6.3kHz, −10dB	
P-4-L300	315Hz, 0dB	Playback Level Adjustment

Playback Head Azimuth Check

Note : This set is not featured the head azimuth adjustment. When replacing the head, check the both L-ch and R-ch output levels and also those phases.

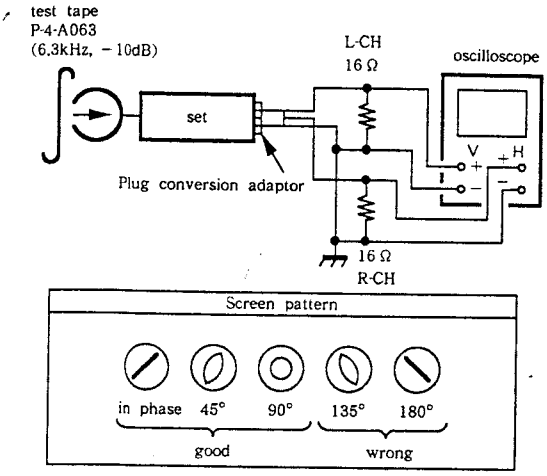
Procedure :

1. Playback mode.



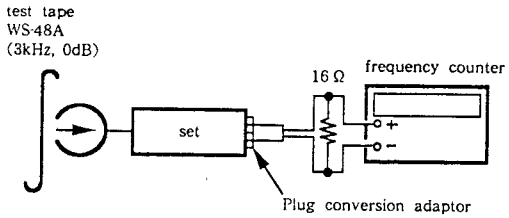
1) Playback the P-4-A100 in FWD mode and read the VTVM (both L-ch and R-ch).
2) Change to REW mode and read the VTVM (both L-ch and R-ch).
3) Confirm that the level difference between step 1 and 2 is within 5dB (both L-ch and R-ch).

2. Phase Check



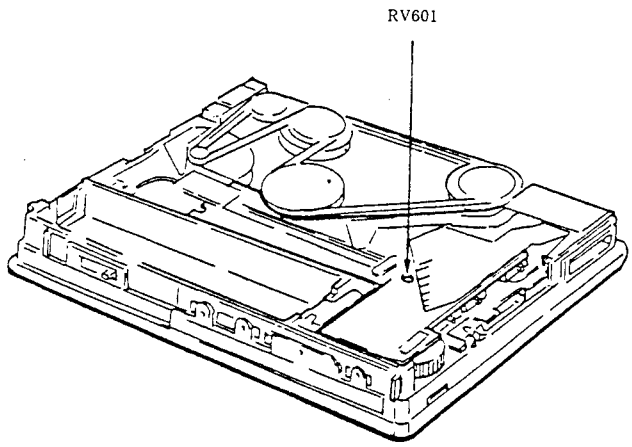
Tape Speed Adjustment

Procedure :



1. Playback WS-48A (tape center portion) in FWD mode. Adjust the RV601 so that the frequency counter reads 3,000Hz±15Hz.
2. Playback WS-48A (tape center portion) in REV mode. Confirm that the reading of frequency counter is within 2.0% from the reading in step 1.

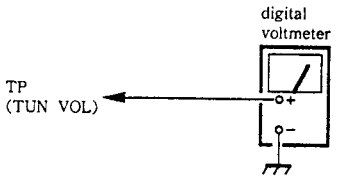
Adjustment Parts Location Diagram



Radio Section (WM-F702 only)

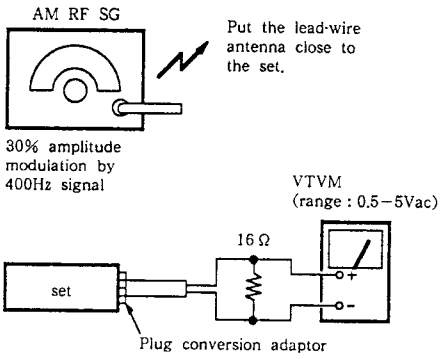
AM SECTION

BAND switch : AM



AM TUNING VOLTAGE ADJUSTMENT		
Adjust for following values on digital voltmeter		
	US model	AEP, UK, ET, AUS model
Display indication	AM 530kHz	AM 531kHz
Digital voltmeter reading	1.1V	
Adjustment part	T2	

AM Tracking Adjustment



- Repeat the procedures in each adjustment several times, and the tracking adjustment should be finally done by the trimmer capacitors.

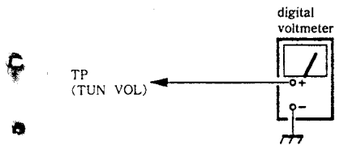
AM TRACKING ADJUSTMENT			
Adjust for a maximum reading on VTVM.			
US model	Display indication	AM 630kHz	AM 1,490kHz
	SG frequency	630kHz	1,490kHz
AEP, UK ET, AUS model	Display indication	AM 621kHz	AM 1,395kHz
	SG frequency	621kHz	1,395kHz
Adjustment part		L8	CT3

AM IF ALIGNMENT	
Adjust for a maximum reading on VTVM.	
SG frequency	450kHz
Adjustment parts	T1

FM SECTION

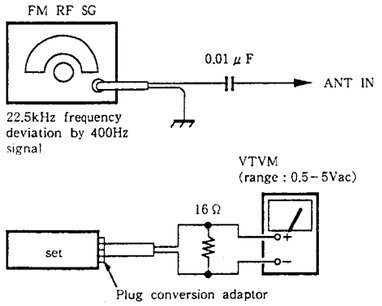
FM Tuning Voltage Adjustment

BAND switch : FM



FM TUNING VOLTAGE ADJUSTMENT			
Adjust for following values on digital voltmeter			
	US model	AEP, UK model	ET, AUS model
Display indication	FM 87.9MHz	FM 87.5MHz	FM 76MHz
Digital voltmeter reading	2.6V	3.5V	1.2V
Adjustment part	L4		

FM Tracking Adjustment

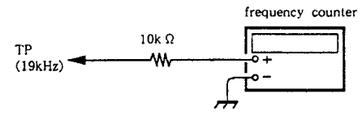


- Repeat the procedures in each adjustment several times, and the tracking adjustment should be finally done by the trimmer capacitors.

FM TRACKING ADJUSTMENT			
Adjust for a maximum reading on VTVM.			
US model	Display indication	FM 87.9MHz	FM 107.9MHz
	SG frequency	87.9MHz	107.9MHz
AEP, UK model	Display indication	FM 87.5MHz	FM 108.0MHz
	SG frequency	87.5MHz	108.0MHz
ET, AUS model	Display indication	FM 76MHz	TV 3CH
	SG frequency	76MHz	107.75MHz
Adjustment part		L3	CT2

VCO Adjustment

BAND switch : FM

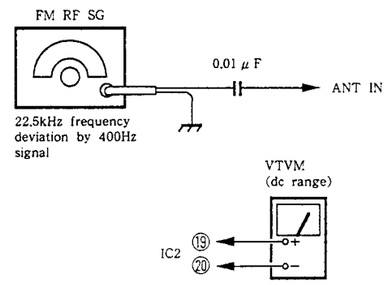


Procedure :

1. Connect an electrolytic capacitor 1 μ F between TP (DET OUT) and ground.
2. Adjust RV1 for 19±0.02kHz on the counter.
3. Remove electrolytic capacitor connected in step 1.

NULL Adjustment

BAND switch : FM

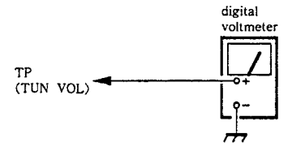


NULL ADJUSTMENT			
Adjust for 0V reading on VTVM.			
	US model	AEP, UK model	ET, AUS model
Display indication	FM 97.9MHz	FM 98MHz	FM 90MHz
SG frequency	97.9MHz	98MHz	90MHz
Adjustment part	CT4		

TV SECTION (ET, AUS model)

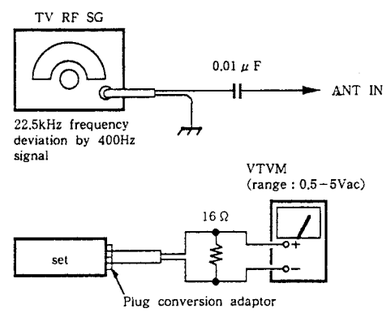
TV Tuning Voltage Adjustment

BAND switch : TV



TV TUNING VOLTAGE ADJUSTMENT		
Adjust for following values on digital voltmeter.		
Display indication	TV 4CH	
Digital voltmeter reading	3.1V	
Adjustment part	L2	

TV Tracking Adjustment

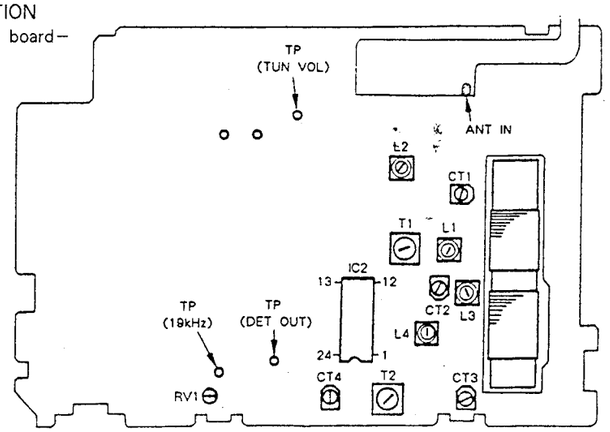


- Repeat the procedures in each adjustment several times, and the tracking adjustment should be finally done by the trimmer capacitors.

TV TRACKING ADJUSTMENT		
Adjust for a maximum reading on VTVM.		
Display indication	TV 4CH	TV 12CH
SG frequency	175.75MHz	221.75MHz
Adjustment part	L1	CT1

ADJUSTMENT LOCATION

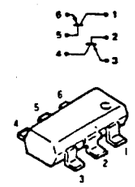
-radio board-



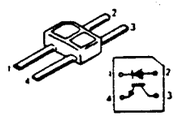
SECTION 4
DIAGRAMS

4-1. SEMICONDUCTOR LEAD LAYOUTS

XN4608

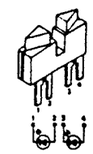


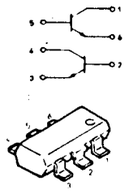
NJL5161K-B



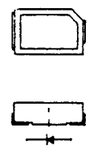
XN4215
XN4501

GL102R6

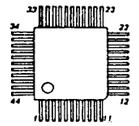




MA110



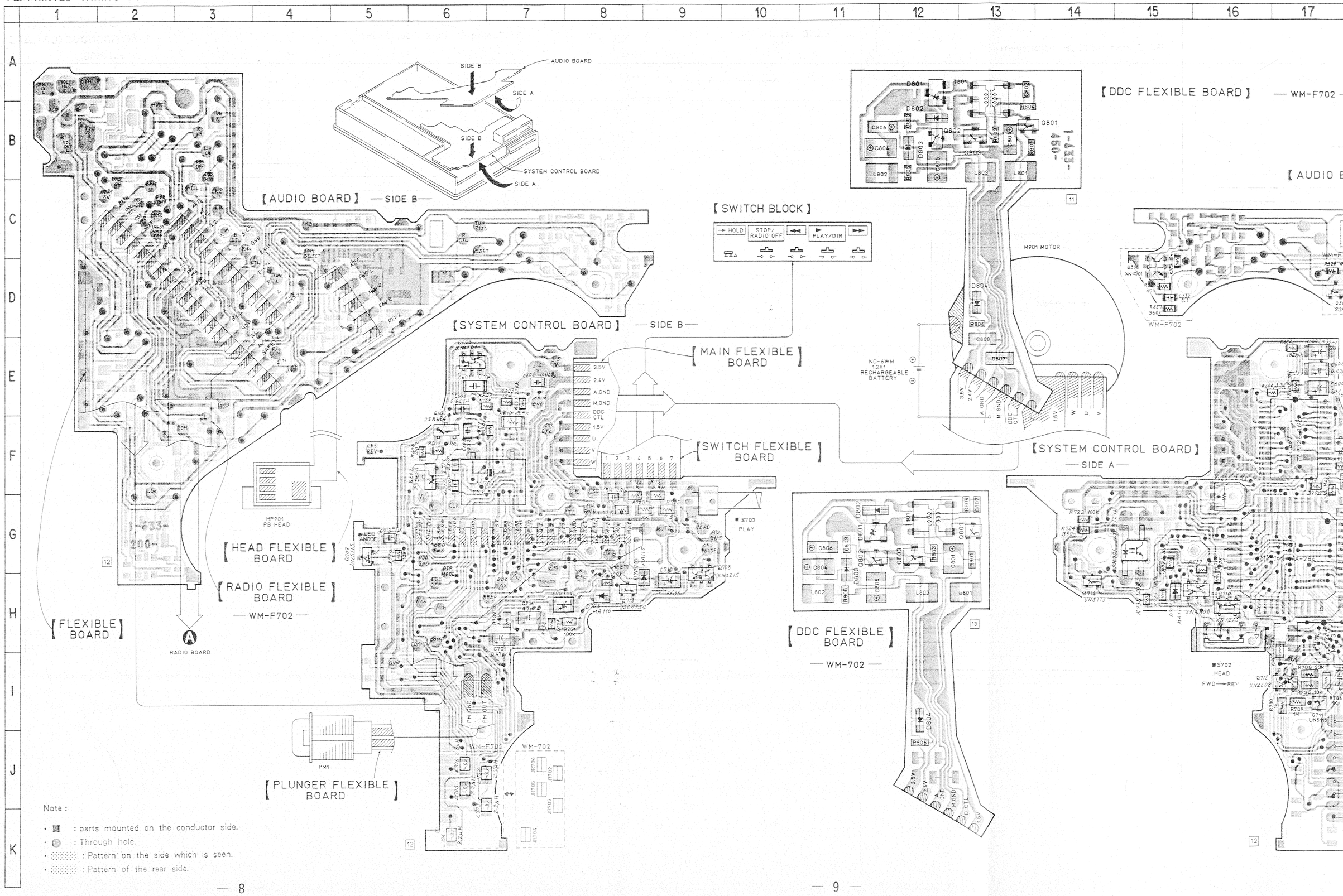
MSM6404A-286



- **SEMICONDUCTOR LOCATION**
  -CASSETTE SECTION-

Ref. No.	Location	Ref. No.	Location
IC101	D-19	Q712	I-17
IC102	D-21	Q713	H-8
IC103	B-21	Q714	H-14
IC104	E-21		
IC601	F-17	D701	H-15
IC701	G-17	D702	F-18
IC702	H-17	D703	H-8
		D704	H-8
Q301	D-21		
Q302	B-22	PH701	G-15
Q303	G-21		
Q304	F-20	WM-702	
Q305	D-20	Q801	G-13
		Q802	G-11
Q306	D-15	Q803	G-12
Q307	D-17		
Q501	I-9	D801	G-11
Q502	I-9	D802	G-11
Q601	F-6	D803	H-11
		D804	I-12
Q602	F-6		
Q603	E-6	WM-F702	
Q701	I-18	Q801	B-13
Q702	G-18	Q802	B-12
Q706	H-16	Q803	B-13
Q707	F-18	D801	A-12
Q708	H-9	D802	B-12
Q709	G-5	D803	B-12
Q710	H-16	D804	D-13
Q711	I-17		

4-2. PRINTED WIRING BOARDS —CASSETTE SECTION—



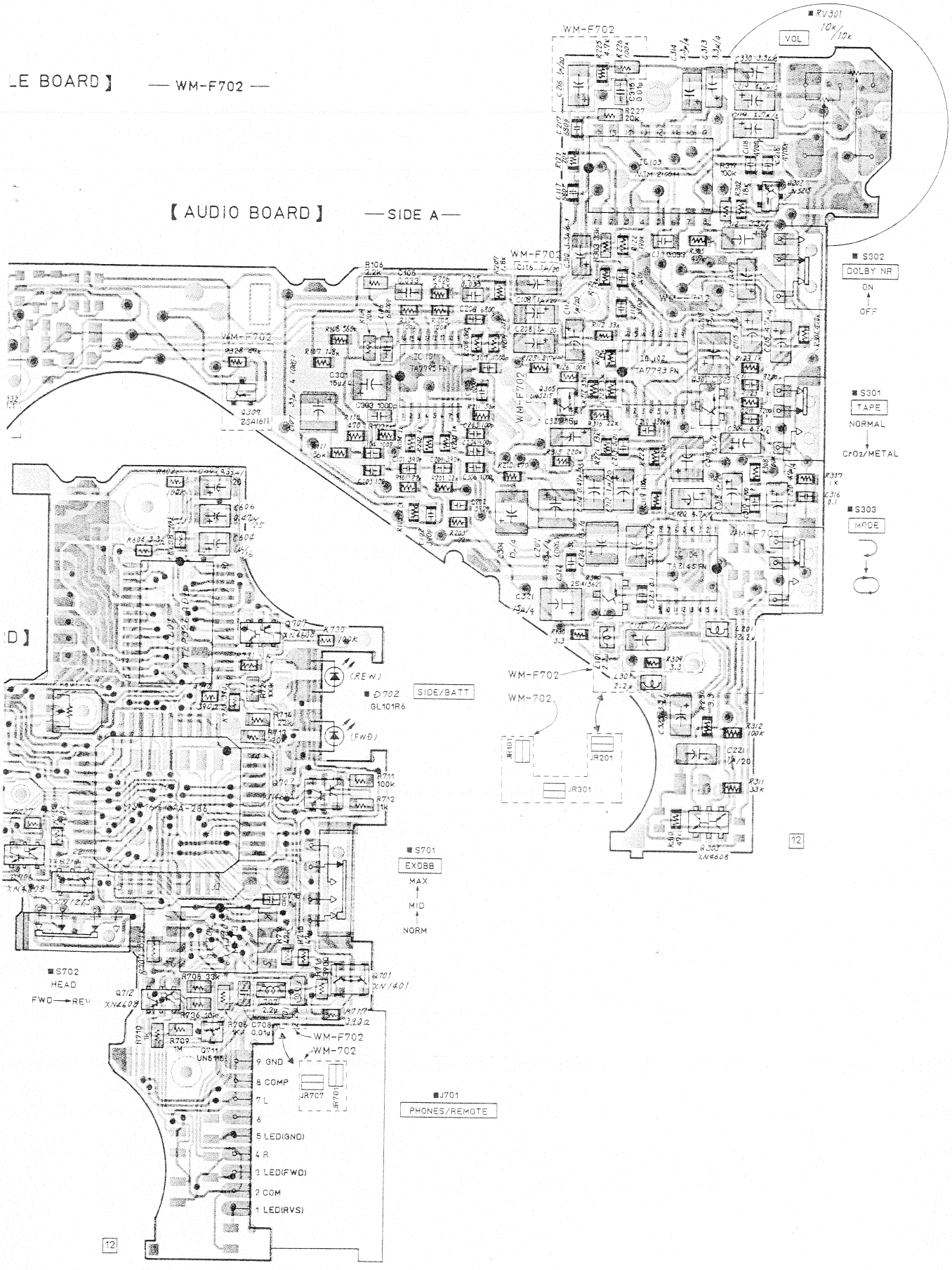
Note :

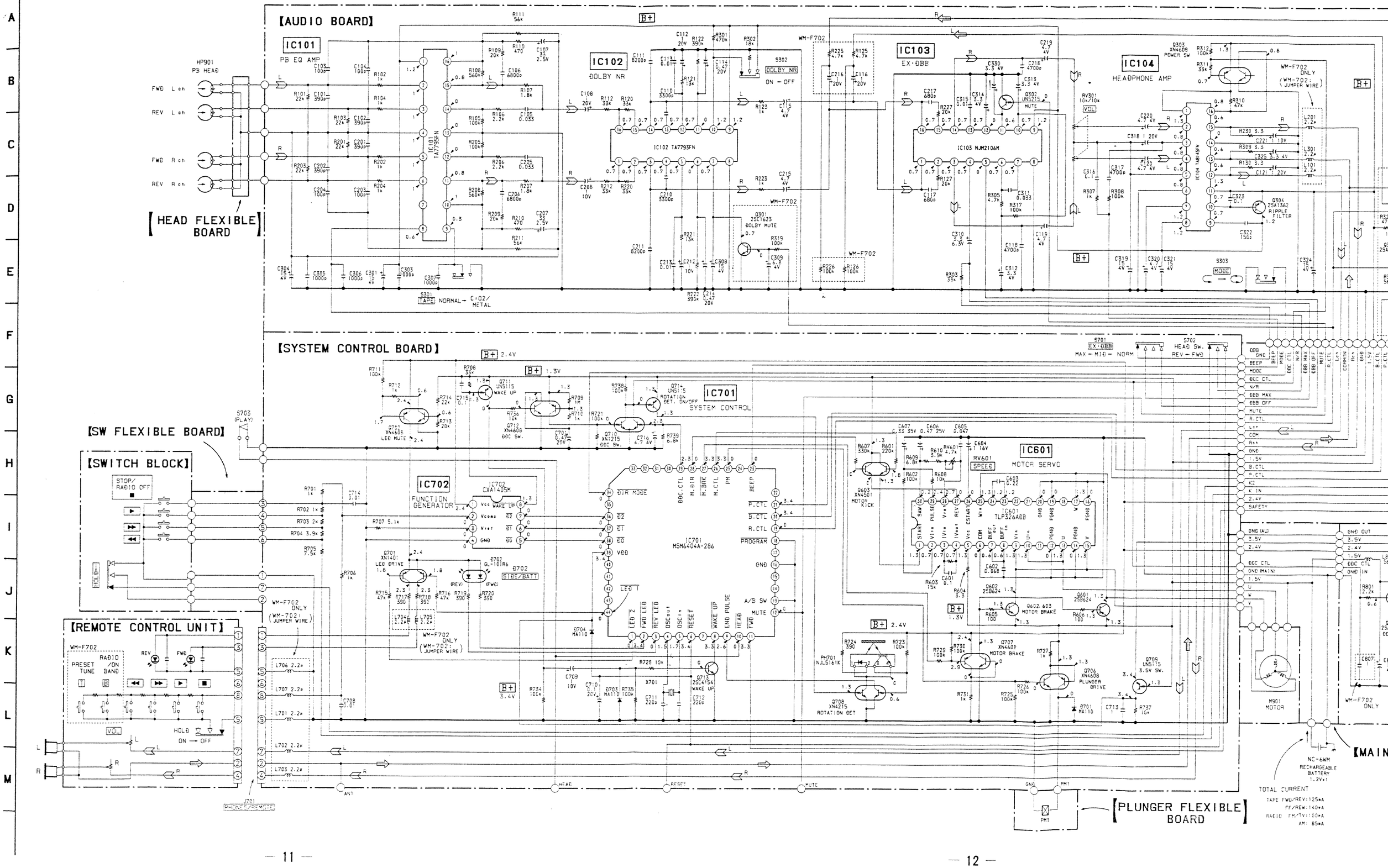
- ▩ : parts mounted on the conductor side.
- ◯ : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.

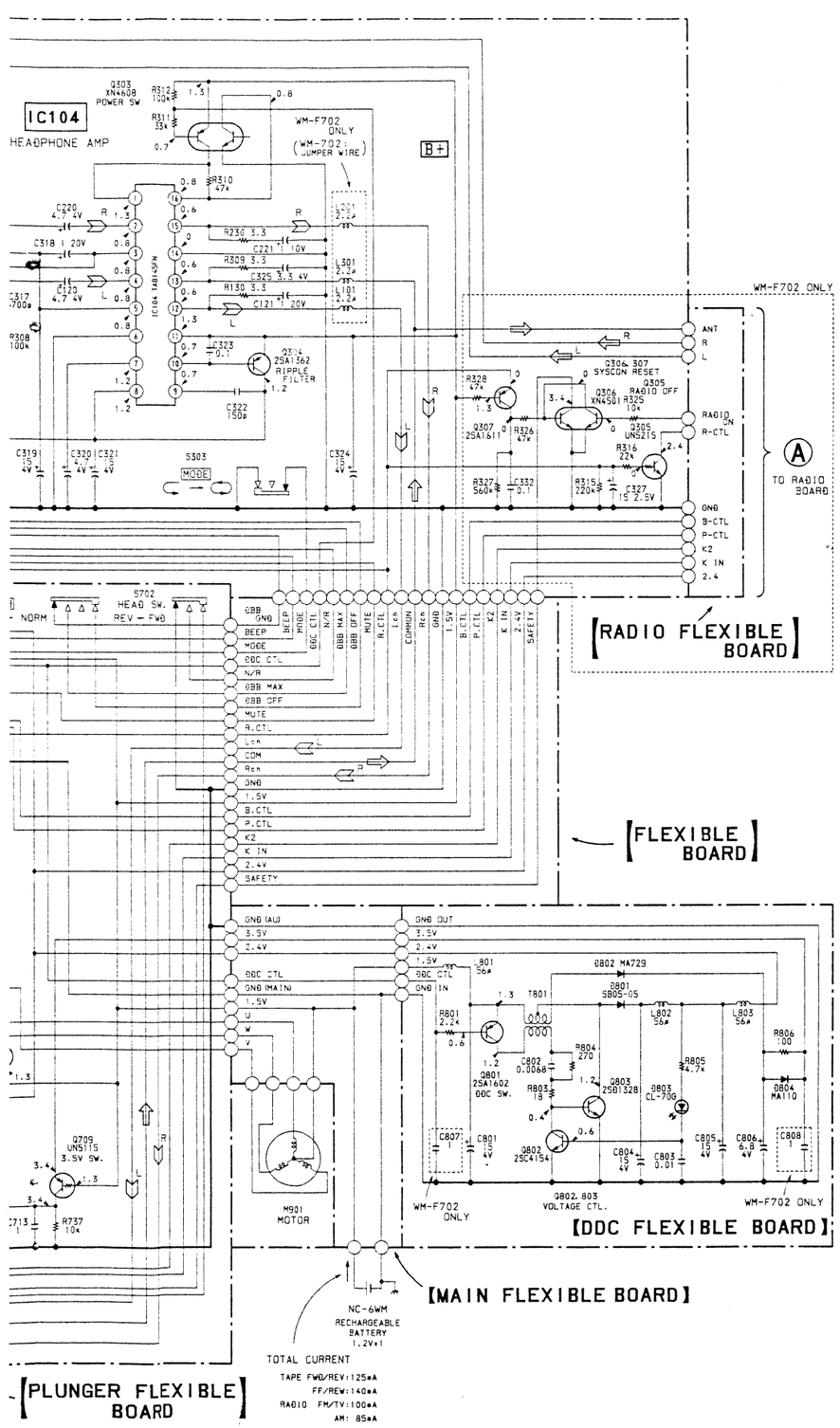
16	17	18	19	20	21	22	23

LE BOARD】 — WM-F702 —

【AUDIO BOARD】 —SIDE A—




【AUDIO BOARD】
IC101
PB EQ AMP
IC102
DOLBY NR
IC103
EX-DBB
IC104
HEADPHONE AMP
HP901
PB HEAD
FWD L ch
REV L ch
FWD R ch
REV R ch
【HEAD FLEXIBLE BOARD】
S301
TAPE NORMAL – CrO2/METAL
S302
DOLBY NR
ON – OFF
WM-F702
Q301 2SC1623 DOLBY MUTE
Q302 UN5215 MUTE
Q303 XN4608 POWER SW
Q304 2SA1362 RIPPLE FILTER
RV301 10K/10K VOL
S303 MODE
【SYSTEM CONTROL BOARD】
IC701
SYSTEM CONTROL
IC702
FUNCTION GENERATOR
IC601
MOTOR SERVO
S701 EX-DBB MAX – MID – NORM
S702 HEAD Sw. REV – FWD
S703 (PLAY)
【SW FLEXIBLE BOARD】
【SWITCH BLOCK】
STOP/RADIO OFF
HOLD
【REMOTE CONTROL UNIT】
WM-F702
PRESET TUNE
RADIO /ON BAND
VOL
HOLD ON – OFF
J701 PHONES/REMOTE
WM-F702 ONLY (WM-702: JUMPER WIRE)
【PLUNGER FLEXIBLE BOARD】
M901 MOTOR
NC-6WM RECHARGEABLE BATTERY 1.2V×1
TOTAL CURRENT
TAPE FWD/REV:125mA
FF/REW:140mA
RADIO FM/TV:100mA
AM: 85mA
ANT
HEAD
RESET
MUTE
PM1
【MAIN

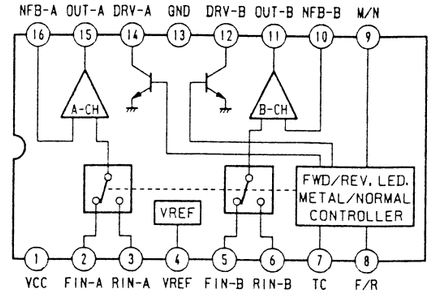


Note :

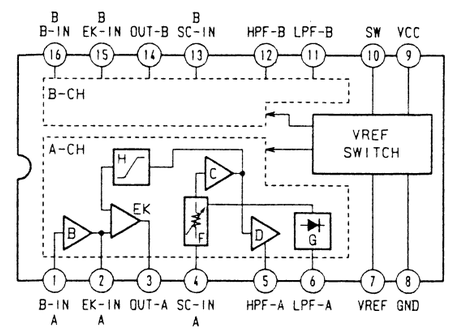
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- **B+** : B+ Line
- ▭ : adjustment for repair.
- Total current is measured with no cassette installed.
- Power voltage is dc 1.3V and fed with regulated dc power supply from battery terminal.
- Voltage and waveforms are dc with respect to ground in playback mode.
- no mark : FWD
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : RADIO
  ⇨ : PB

4-4. IC BLOCK DIAGRAMS

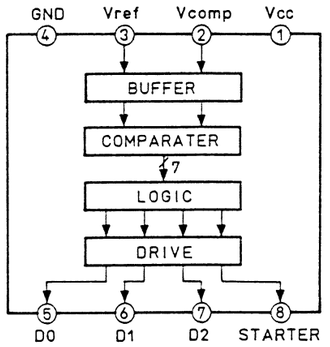
IC101 TA7795FN


NFB-A OUT-A DRV-A GND DRV-B OUT-B NFB-B M/N
16 15 14 13 12 11 10 9
A-CH
B-CH
VREF
FWD/REV, LED, METAL/NORMAL CONTROLLER
1 2 3 4 5 6 7 8
VCC FIN-A RIN-A VREF FIN-B RIN-B TC F/R

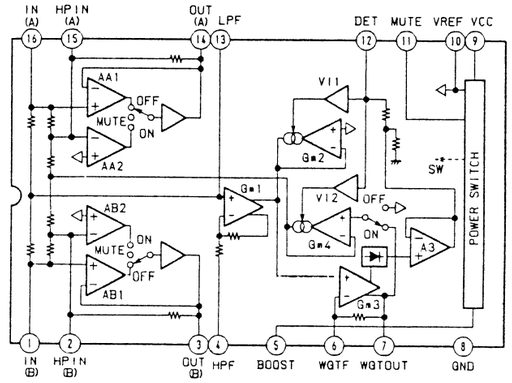
IC102 TA7793FN



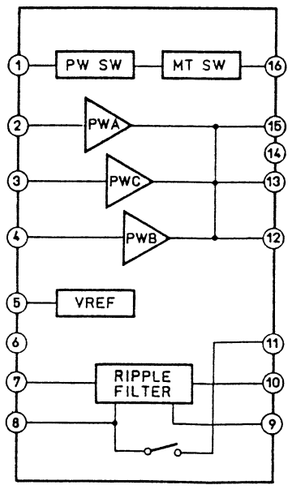
IC702 CXA1405M



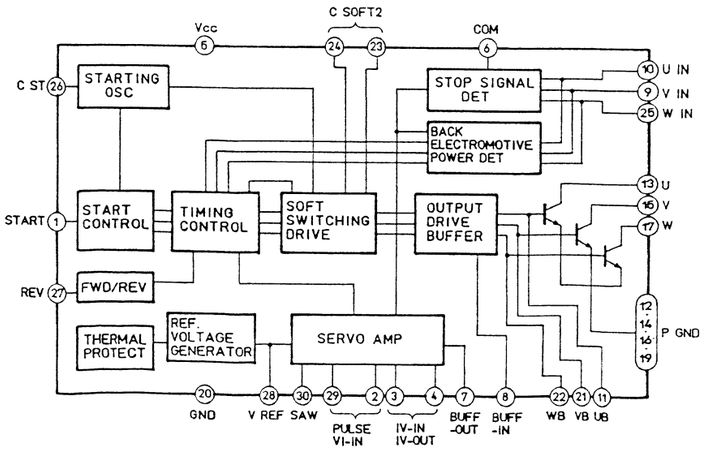
IC103 NJM2106



IC104 TA8145FN



IC601 TLP326



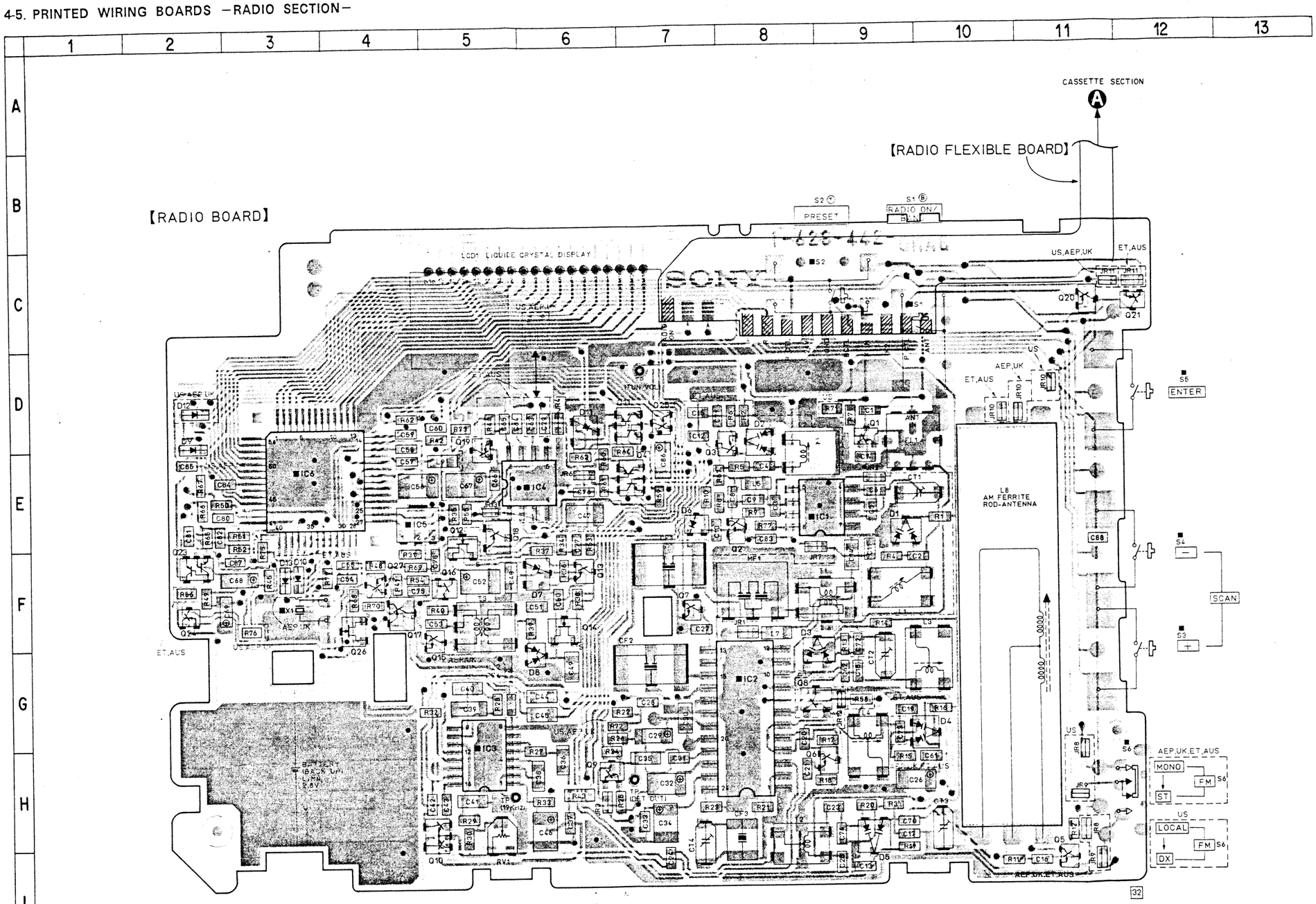
• SEMICONDUCTOR LOCATION —RADIO SECTION—

Ref. No.	Location
IC1	E-8
IC2	G-8
IC3	H-5
IC4	E-6
IC5	E-4
IC6	E-3
Q1	D-9
Q2	E-8
Q3	E-7
Q4	E-7
Q5	I-11
Q6	H-8
Q7	F-7
Q8	G-8
Q9	H-6
Q10	I-5
Q11	D-7
Q12	E-5
Q13	F-6
Q14	F-6
Q15	G-5
Q16	F-5
Q17	F-4
Q18	E-5
Q19	D-5
Q20	C-11
Q21	C-12
Q23	F-2
Q24	F-2
Q25	D-7
Q26	F-4
Q27	F-4
D1	E-9
D2	D-8
D3	F-8
D4	G-10
D5	I-9
D6	E-7
D7	F-6
D8	G-6
D9	D-2
D10	F-3
D11	D-6
D12	D-2
D13	F-3

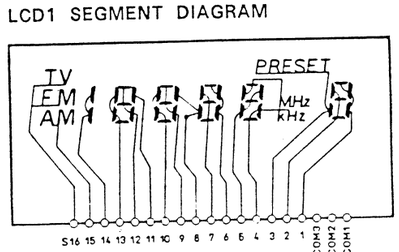
Note :

- ■ : parts mounted on the conductor side.
- ◉ : Through hole.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.
- □ : Components extracted from the rear side.

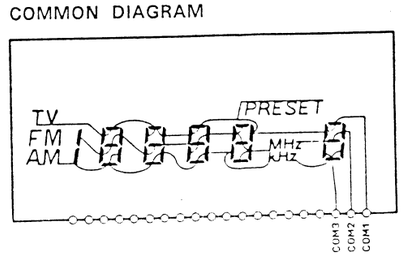
4-5. PRINTED WIRING BOARDS —RADIO SECTION—



LCD1 SEGMENT DIAGRAM

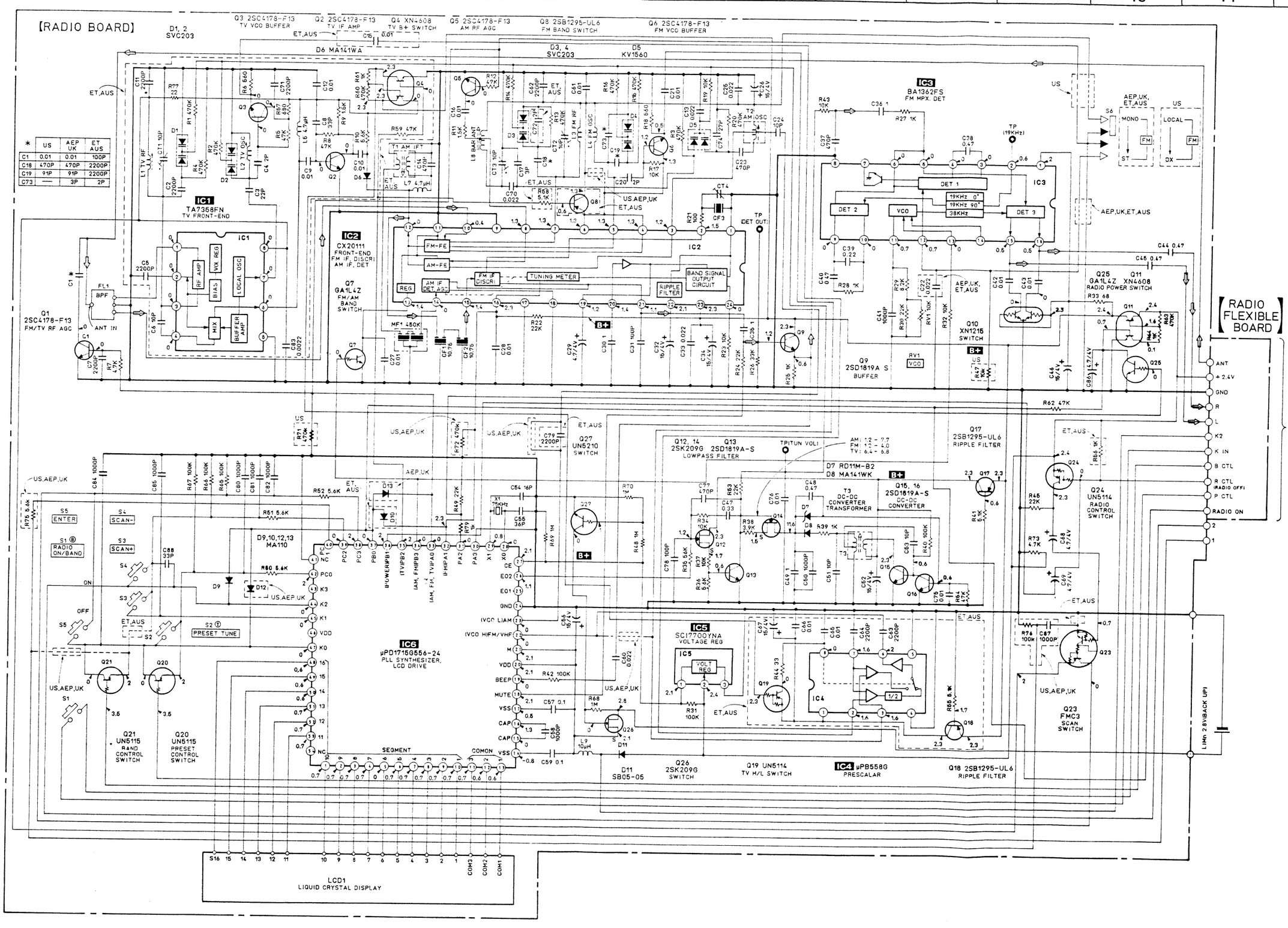


COMMON DIAGRAM



Note :

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- **B+** : B+ Line
- □ : adjustment for repair.
- Power voltage is dc 1.3V and fed with regulated dc power supply from battery terminal.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM
- Voltages are taken with a VOM (Input impedance 10M Ω) Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : RADIO

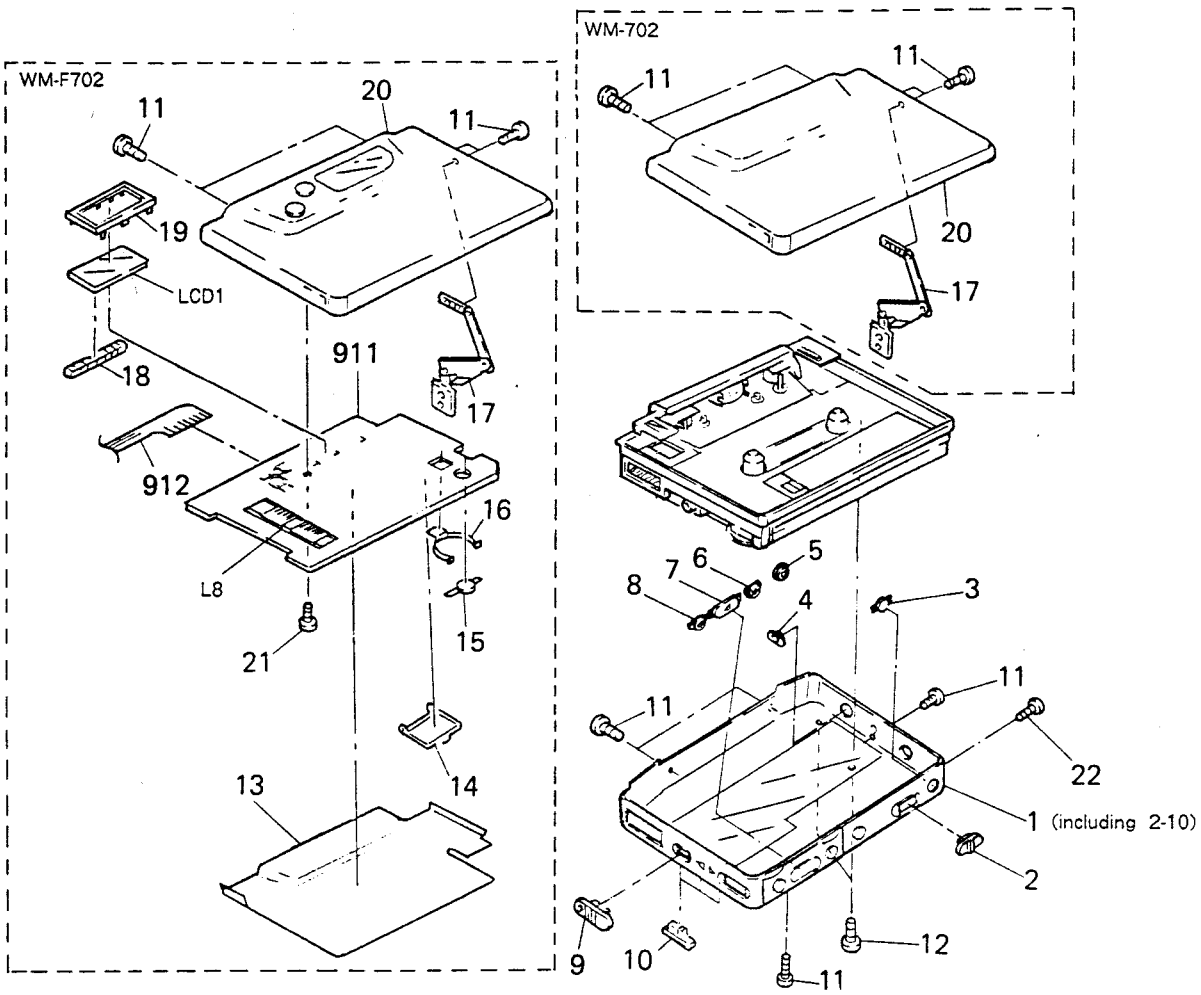

【RADIO BOARD】
D1, 2 SVC203
Q3 2SC4178-F13 TV VCO BUFFER
Q2 2SC4178-F13 TV IF AMP
Q4 XN4608 TV B+ SWITCH
Q5 2SC4178-F13 AM RF AGC
Q8 2SB1295-UL6 FM BAND SWITCH
Q6 2SC4178-F13 FM VCO BUFFER
D6 MA141WA
D3, 4 SVC203
D5 KV1560
IC1 TA7368FN TV FRONT-END
IC2 CX20111 FRONT-END FM IF, DISCRI AM IF, DET
IC3 BA1362FS FM MPX DET
IC4 μPB558G PRESCALAR
IC5 SC1770OYNA VOLTAGE REG
IC6 μPD1715G556-24 PLL SYNTHESIZER, LCD DRIVE
Q1 2SC4178-F13 FM/TV RF AGC
Q7 GA1L4Z FM/AM BAND SWITCH
Q9 2SD1819A S BUFFER
Q10 XN1215 SWITCH
Q11 XN4608 RADIO POWER SWITCH
Q25 GA1L4Z
Q12, 14 Q13 2SK209G 2SD1819A-S LOWPASS FILTER
Q27 UN5210 SWITCH
Q17 2SB1295-UL6 RIPPLE FILTER
Q15, 16 2SD1819A-S DC-DC CONVERTER
Q24 UN5114 RADIO CONTROL SWITCH
Q21 UN5115 BAND CONTROL SWITCH
Q20 UN5115 PRESET CONTROL SWITCH
Q23 FMC3 SCAN SWITCH
Q26 2SK209G SWITCH
Q19 UN5114 TV H/L SWITCH
Q18 2SB1295-UL6 RIPPLE FILTER
D7 RD11M-B2
D8 MA141WK
D11 SB05-05
D9,10,12,13 MA110
T1 AM IFT
T2 AM OSC
T3 DC-DC CONVERTER TRANSFORMER
L1 TV RF
L2 TV OSC
L3 FM RF
L4 FM OSC
L5 FM IF
L6 4.7μH
L7 4.7μH
L8 BAR ANT
L9 10μH
FL1 BPF
X1 75KHz
S1 RADIO ON/BAND
S2 PRESET TUNE
S3 SCAN+
S4 SCAN-
S5 ENTER
S6
LCD1 LIQUID CRYSTAL DISPLAY
【RADIO FLEXIBLE BOARD】
CASSETTE SECTION
LINK 2 (VIBACK UP)
ANT
+2.4V
GND
R
L
K2
K IN
B CTL
R CTL (RADIO OFF)
P CTL
RADIO ON
TP (19KHz)
TP IFDET OUT
TP TUN VOLT
AM: 1.2 ~ 7.7
FM: 1.1 ~ 4.0
TV: 6.4 ~ 6.8
DET 1
DET 2
DET 3
VCO
19KHz 0°
19KHz 90°
38KHz
FM-FE
AM-FE
FM IF DISCRI
TUNING METER
BAND SIGNAL OUTPUT CIRCUIT
RIPPLE FILTER
AM IF DET AGC
REG
RF AMP
VOL REG
BIAS
LOCAL OSC
MIX
BUFFER AMP
VOLT REG
1/2
MONO
LOCAL
FM
ST
DX
ET,AUS
US,AEP,UK
AEP,UK,ET,AUS
US,ET,AUS
B+
ON
OFF
SEGMENT
COMON
COM3
COM2
COM1

SECTION 5
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) ... KNOB, BALANCE (WHITE)
  ↑ Cabinet's Color ↑ Parts Color

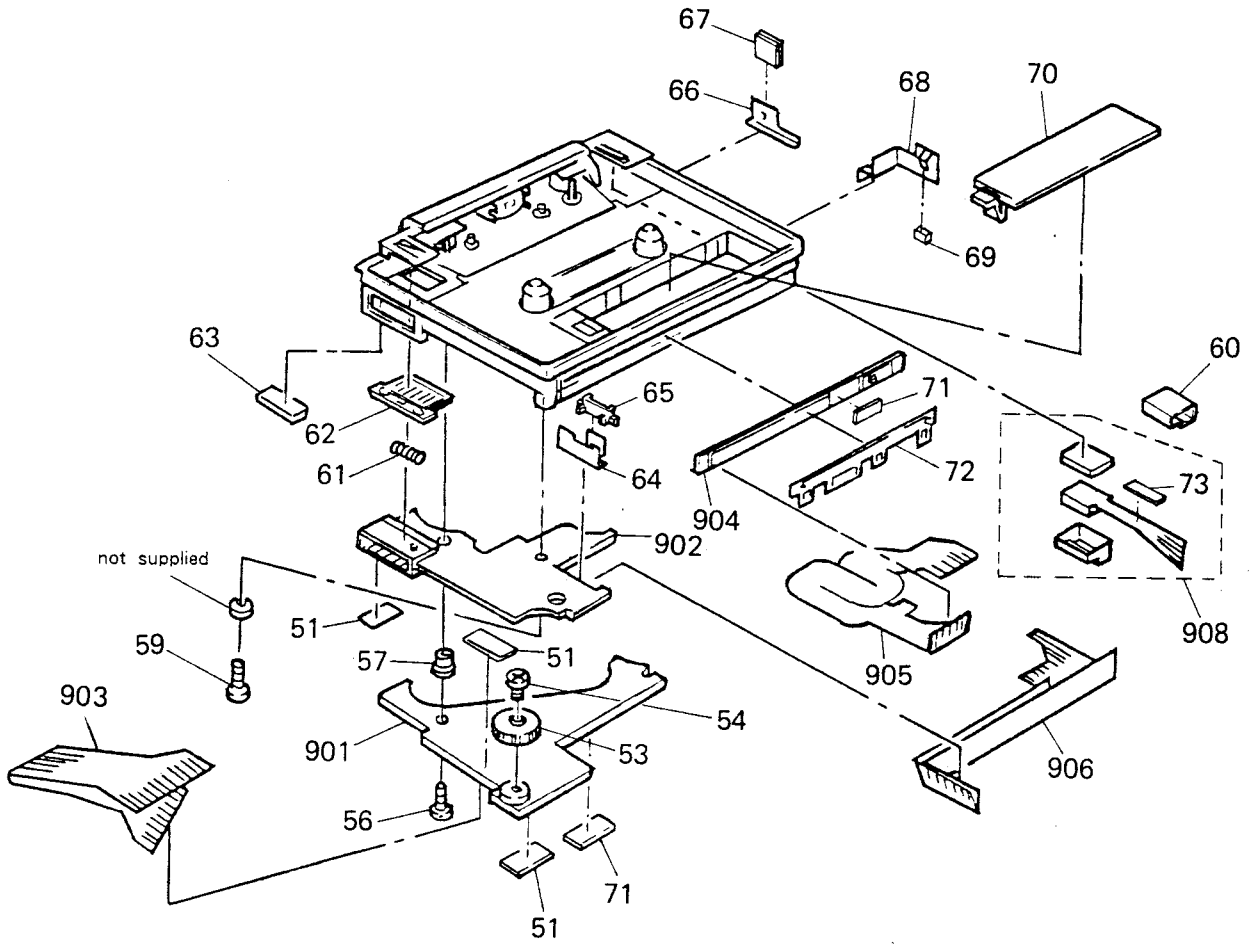
(1)



No.	Part No.	Description	Remarks
1	X-3349-893-6	(702).....CASE ASSY (BLACK)	
	X-3349-894-6	(702:AEP,E)....CASE ASSY (SILBER)	
	X-3349-898-1	(F702).....CASE ASSY (BLACK)	
	X-3349-899-1	(F702:AEP,ET,AUS)...CASE ASSY (SILBER)	
2	3-356-829-01	KNOB (HOLD)	
3	3-356-814-01	BUTTON (OPEN)	
4	3-349-899-01	PLATE, ORNAMENTAL	
5	3-349-896-01	BUTTON (STOP)	
6	3-349-895-01	BUTTON (REW)	
7	3-349-897-02	BUTTON (PLAY)	
8	3-349-898-02	BUTTON (FF)	
9	3-350-914-01	KNOB (DBB)	
10	3-350-917-01	KNOB (DOLBY)	
11	3-704-197-01	(SILVER)...SCREW (M1.4X1.6), LOCKING	
	3-704-197-02	(BLACK)....SCREW (M1.4X1.6), LOCKING	
12	3-355-424-01	(SILVER)...SCREW, TAPPING	
	3-355-424-71	(BLACK)....SCREW, TAPPING	
13	*X-3349-830-5	COVER ASSY	
14	3-350-963-01	LID (RADIO), BATTERY CASE	
15	3-350-955-01	(F702)...TERMINAL BOARD (D), BATTERY	
16	3-350-954-01	(F702)...TERMINAL BOARD (C), BATTERY	
17	X-3349-879-4	ARM ASSY (SP), CLICK	
18	1-535-749-11	(F702)...CONDUCTOR (CONNECTION)	
19	*3-350-956-01	(F702)...CASE, SHIELD	

No.	Part No.	Description	Remarks
20	X-3349-883-1	(F702:ET,AUS)...LID ASSY (BLACK), CASSETTE	
	X-3349-884-1	(F702:ET,AUS)...LID ASSY (SILVER), CASSETTE	
	X-3350-880-1	(702:E)....LID ASSY (SILVER), CASSETTE	
	X-3350-882-1	(702:E).....LID ASSY (BLACK), CASSETTE	
	X-3350-907-1	(702:AEP).....LID ASSY (SILVER), CASSETTE	
	X-3350-908-1	(702:AEP,UK)...LID ASSY (BLACK), CASSETTE	
	X-3350-909-1	(F702:AEP,UK) ...LID ASSY (BLACK), CASSETTE	
	X-3350-910-1	(F702:AEP)...LID ASSY (SILVER), CASSETTE	
	X-3350-911-1	(F702:US).....LID ASSY (BLACK), CASSETTE	
21	3-355-424-01	SCREW, TAPPING	
22	3-356-816-01	(SILVER)...SCREW (B1.7), TAPPING	
	3-356-816-11	(BLACK)....SCREW (B1.7), TAPPING	
911	A-3216-898-A	(F702:ET,AUS)...PC BOARD ASSY, RADIO	
	A-3222-050-A	(F702:US).....PC BOARD ASSY, RADIO	
	A-3222-051-A	(F702:AEP,UK)...PC BOARD ASSY, RADIO	
912	1-633-216-11	PC BOARD, FLEXIBLE (RADIO)	
L8	1-402-282-11	ANTENNA, FERRITE-ROD (WM)	
LCD1	1-808-578-11	(F702)...DISPLAY PANEL, LIQUID CRYSTAL	

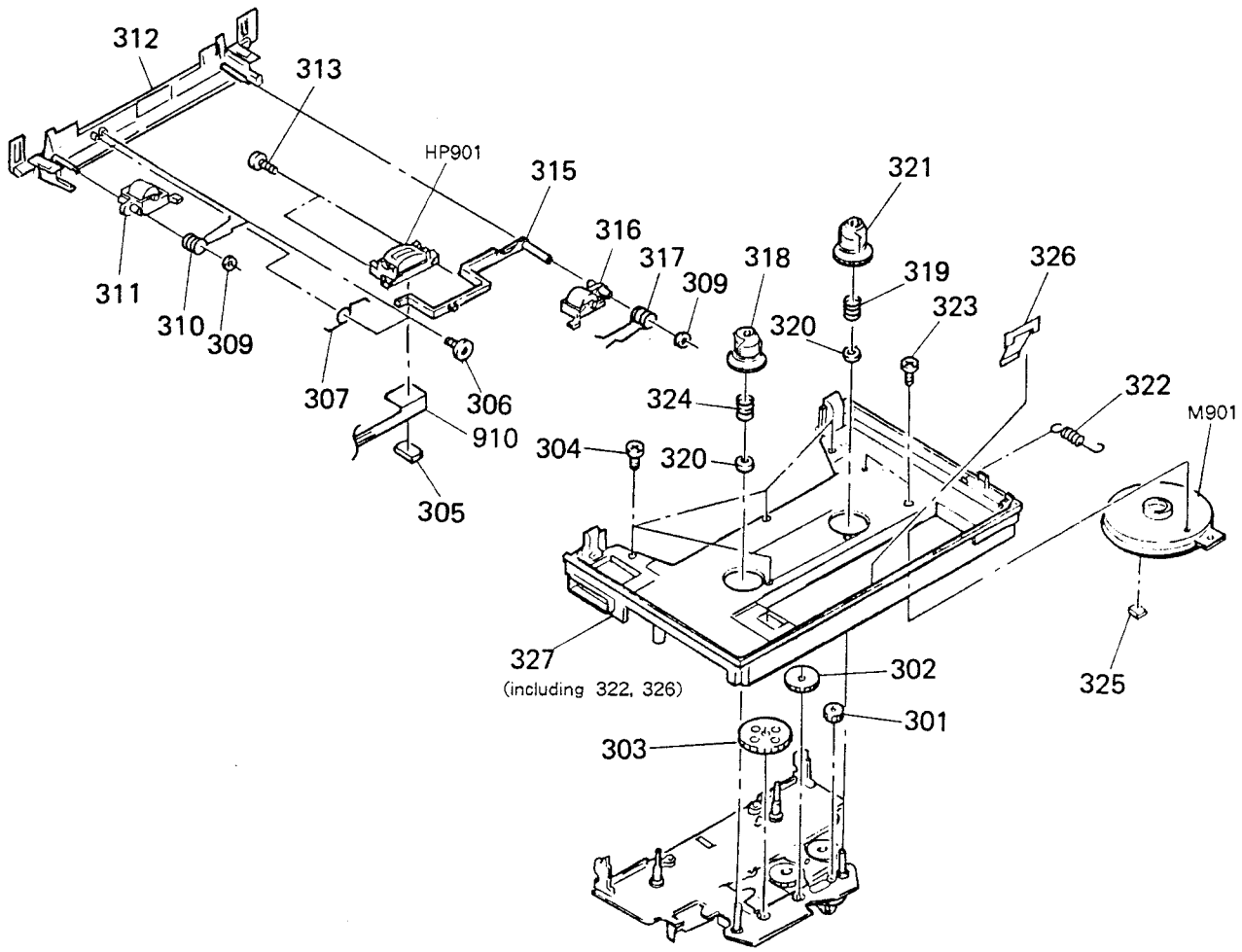
(2)



No.	Part No.	Description	Remarks
51	3-831-441-11	CUSHION (B)	
53	3-356-826-01	KNOB (VOL)	
54	3-703-502-31	SCREW	
56	3-335-797-01	SCREW (M1.4X2), TOOTHED LOCK	
57	*3-356-853-01	SPACER (D)	
59	3-704-197-11	SCREW (M1.4X2.0), LOCKING	
60	*3-350-928-01	(F702)...CASE, SHIELD	
61	3-350-901-01	SPRING, COMPRESSION	
62	3-350-904-01	SLIDER	
63	*3-309-595-00	SHEET, INSULATING, PACK	
64	3-350-911-01	TERMINAL BOARD (B), BATTERY	
65	3-356-819-01	INSULATOR (A)	
66	3-350-912-01	CONTACT	
67	3-356-815-01	INSULATOR (B)	
68	3-356-830-01	TERMINAL (A), BATTERY	
69	9-911-839-XX	SPACER (C)	

No.	Part No.	Description	Remarks
70	3-356-831-01	LID, BATTERY CASE	
71	3-831-441-XX	SPACER	
72	3-352-163-01	SHEET (SWITCH)	
901	A-3089-536-A	(702)....MOUNTED PCB (INS), AUDIO	
	A-3289-701-A	(F702)...MOUNTED PCB (INS), AUDIO	
902	A-3215-838-A	(702)....MOUNTED PCB, SYSTEM CONTROL	
	A-3216-964-A	(F702)...MOUNTED PCB, SYSTEM CONTROL	
903	1-633-215-11	PC BOARD, FLEXIBLE	
904	1-572-183-11	SWITCH (BLOCK TYPE)	
905	1-633-261-11	PC BOARD, SWITCH FLEXIBLE	
906	1-633-217-11	PC BOARD, MAIN FLEXIBLE	
908	A-3216-862-A	(702)....DDC ASSY	
	A-3216-966-A	(F702)...DDC ASSY	

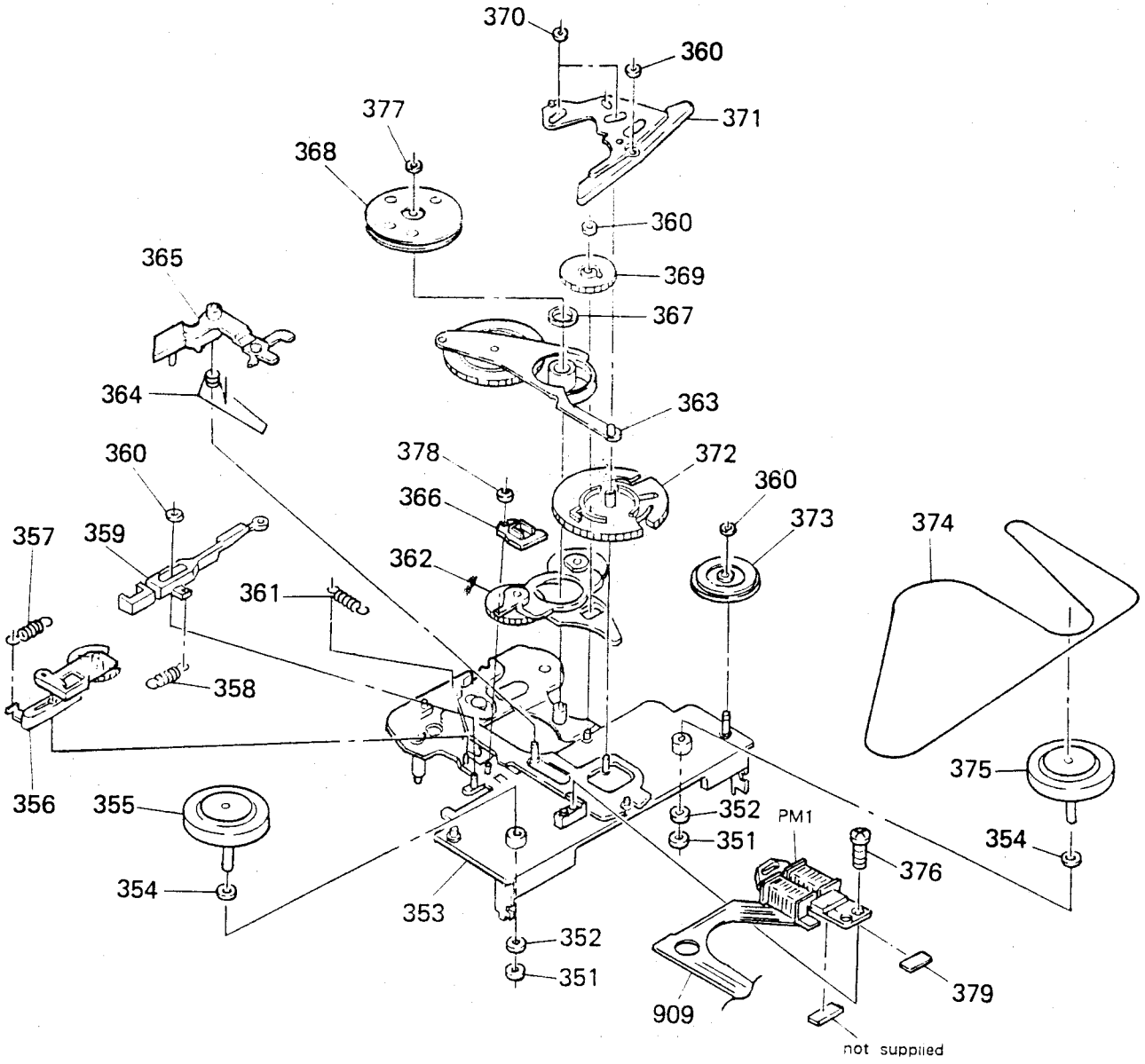
(3) MECHANISM SECTION-1 (MT-WM702-17)



No.	Part No.	Description	Remarks
301	3-349-852-01	GEAR (C)	
302	3-349-830-01	GEAR (B)	
303	X-3349-808-1	GEAR (A) ASSY	
304	3-331-047-03	SCREW (M1.4X1.8), SPECIAL HEAD	
305	*3-338-667-01	SHEET, ADHESIVE, DOUBLE-FACE	
306	3-704-382-31	SCREW (M1.4X2.5), TAPPING	
307	3-357-743-01	SPRING (HEAD LEVER K)	
309	3-349-859-01	WASHER	
310	3-349-864-01	SPRING (PINCH LEVER N), TORSION	
311	X-3349-810-1	PINCH LEVER (N) ASSY	
312	X-3349-863-1	HOLDER ASSY (R)	
313	3-704-252-21	SCREW (M1.4X3.8)	
315	3-349-801-01	LEVER, HEAD	
316	X-3349-804-1	PINCH LEVER (R) ASSY	

No.	Part No.	Description	Remarks
317	3-357-711-01	SPRING (PINCH LEVER R), TORSION	
318	3-349-878-01	GEAR (T REEL)	
319	3-349-837-01	SPRING, COMPRESSION	
320	3-349-827-11	WASHER	
321	3-349-877-01	GEAR (S REEL)	
322	3-350-924-01	SPRING, TENSION	
323	3-349-825-01	SCREW	
324	3-355-445-01	SPRING, COMPRESSION	
325	9-911-844-XX	CUSHION (M)	
326	3-356-817-01	SPRING, CASSETTE RETAINER	
327	X-3350-904-1	CHASSIS ASSY, SUB	
910	1-633-449-11	PC BOARD, HEAD FLEXIBLE	
HP901	1-543-702-11	HEAD, MAGNETIC (PLAYBACK)	
M901	1-541-715-11	MOTOR	

(4) MECHANISM SECTION-2 (MT-WM702-17)



No.	Part No.	Description	Remarks
351	3-348-993-01	WASHER	
352	3-350-989-01	WASHER	
353	X-3349-890-1	CHASSIS (P) ASSY	
354	3-350-945-11	WASHER	
355	X-3349-887-1	WHEEL (N) ASSY, CAPSTAN	
356	X-3349-812-1	LEVER (S) ASSY	
357	3-349-816-01	SPRING, TENSION	
358	3-356-895-01	SPRING, TENSION	
359	3-349-880-01	LEVER (P), SW	
360	3-349-859-11	WASHER	
361	3-349-866-01	SPRING (POWER TENSION), TENSION	
362	X-3349-807-1	LEVER ASSY, FR	
363	X-3349-886-1	LEVER ASSY, T	
364	3-349-860-01	SPRING, TORSION	
365	X-3349-885-1	LEVER (PI) ASSY, TRIGGER	

No.	Part No.	Description	Remarks
366	3-356-856-01	STOPPER (P)	
367	3-349-850-01	WASHER	
368	3-356-859-01	PULLEY	
369	3-349-853-01	GEAR (D)	
370	3-349-859-21	WASHER	
371	3-349-884-01	LEVER, NR	
372	3-349-889-04	GEAR (CAM)	
373	3-352-188-02	WHEEL, REVERSE	
374	3-349-814-01	BELT	
375	X-3349-888-1	WHEEL (R) ASSY, CAPSTAN	
376	3-345-648-03	SCREW (M1.4X4.0), TOOTHED LOCK	
377	3-349-859-01	WASHER	
378	3-338-645-31	WASHER (0.8-2.5)	
909	1-631-497-11	PC BOARD, PLUNGER FLEXBLE	
PM1	1-454-490-21	SOLENOID, PLUNGER	

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref.No.	Part No.	Description
901	A-3089-536-A	(702)....MOUNTED PCB (INS), AUDIO
	A-3289-701-A	(F702)...MOUNTED PCB (INS), AUDIO
902	A-3215-838-A	(702)....MOUNTED PCB, SYSTEM CONTROL
	A-3216-964-A	(F702)...MOUNTED PCB, SYSTEM CONTROL
903	1-633-215-11	PC BOARD, FLEXIBLE
904	1-572-183-11	SWITCH (BLOCK TYPE)
905	1-633-261-11	PC BOARD, SWITCH FLEXIBLE
906	1-633-217-11	PC BOARD, MAIN FLEXIBLE
908	A-3216-862-A	(702)....DDC ASSY
	A-3216-966-A	(F702)...DDC ASSY
909	1-631-497-11	PC BOARD, PLUNGER FLEXBLE
910	1-633-449-11	PC BOARD, HEAD FLEXIBLE
911	A-3216-898-A	(F702:ET,AUS)...PC BOARD ASSY, RADIO
	A-3222-050-A	(F702:US).....PC BOARD ASSY, RADIO
	A-3222-051-A	(F702:AEP,UK)...PC BOARD ASSY, RADIO
912	1-633-216-11	PC BOARD, FLEXIBLE (RADIO)

C1-C88:WM-F702 ONLY

C1	1-162-953-11	(ET,AUS).....CERAMIC CHIP	100PF	5%	50V
C1	1-162-970-11	(AEP,UK,US)..CERAMIC CHIP	0.01MF	10%	25V
C2	1-162-966-11	(ET,AUS)...CERAMIC CHIP	0.0022MF	10%	50V
C3	1-162-998-11	(ET,AUS)...CERAMIC CHIP	22PF	5%	50V
C4	1-162-932-11	(ET,AUS)...CERAMIC CHIP	2PF	0.25PF	50V
C5	1-162-966-11	(ET,AUS)...CERAMIC CHIP	0.0022MF	10%	50V
C6	1-162-941-11	(ET,AUS)...CERAMIC CHIP	10PF	0.5PF	50V
C7	1-162-966-11	CERAMIC CHIP	0.0022MF	10%	50V
C9	1-162-970-11	(ET,AUS)...CERAMIC CHIP	0.01MF	10%	25V
C10	1-162-974-11	(ET,AUS)...CERAMIC CHIP	0.01MF		50V
C11	1-162-966-11	(ET,AUS)...CERAMIC CHIP	0.0022MF	10%	50V
C12	1-162-974-11	(ET,AUS)...CERAMIC CHIP	0.01MF		50V
C13	1-162-995-11	CERAMIC CHIP	0.022MF		50V
C14	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C15	1-162-974-11	(ET,AUS)...CERAMIC CHIP	0.01MF		50V
C16	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C17	1-162-934-11	CERAMIC CHIP	3PF	0.25PF	50V
C18	1-162-966-11	(ET,AUS)...CERAMIC CHIP	0.0022MF	10%	50V
C18	1-164-315-11	(AEP,UK,US) ...CERAMIC CHIP	470PF	10%	50V
C19	1-162-966-11	(ET,AUS)...CERAMIC CHIP	0.0022MF	10%	50V
C19	1-162-999-11	(AEP,UK,US) ...CERAMIC CHIP	91PF	5%	50V
C20	1-162-932-11	CERAMIC CHIP	2PF	0.25PF	50V
C21	1-162-970-11	CERAMIC CHIP	0.01MF	10%	25V
C22	1-162-995-11	(ET,AUS,AEP,UK) ...CERAMIC CHIP	0.022MF		50V

Ref.No.	Part No.	Description			
C23	1-164-315-11	CERAMIC CHIP	470PF	10%	50V
C24	1-162-941-11	CERAMIC CHIP	10PF	0.5PF	50V
C25	1-162-995-11	CERAMIC CHIP	0.022MF		50V
C26	1-135-158-21	TANTAL. CHIP	15MF	20%	4V
C27	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C28	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C29	1-135-151-21	TANTAL. CHIP	4.7MF	20%	4V
C30	1-164-346-11	CERAMIC CHIP	1MF		16V
C31	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C32	1-135-158-21	TANTAL. CHIP	15MF	20%	4V
C33	1-162-995-11	CERAMIC CHIP	0.022MF		50V
C34	1-135-158-21	TANTAL. CHIP	15MF	20%	4V
C35	1-164-346-11	CERAMIC CHIP	1MF		16V
C36	1-164-346-11	CERAMIC CHIP	1MF		16V
C37	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C38	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C39	1-164-330-21	CERAMIC CHIP	0.22MF	10%	16V
C40	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C41	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C42	1-162-970-11	CERAMIC CHIP	0.01MF	10%	25V
C43	1-162-970-11	CERAMIC CHIP	0.01MF	10%	25V
C44	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C45	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C46	1-135-158-21	TANTAL. CHIP	15MF	20%	4V
C47	1-164-006-11	CERAMIC CHIP	0.33MF	10%	16V
C48	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C49	1-164-346-11	CERAMIC CHIP	1MF		16V
C50	1-162-964-11	CERAMIC CHIP	0.001MF	10%	50V
C51	1-162-941-11	CERAMIC CHIP	10PF	0.5PF	50V
C52	1-135-158-21	TANTAL. CHIP	15MF	20%	4V
C53	1-162-941-11	CERAMIC CHIP	10PF	0.5PF	50V
C54	1-164-237-11	CERAMIC CHIP	16PF	10%	50V
C55	1-164-238-11	CERAMIC CHIP	36PF	10%	50V
C56	1-135-158-21	TANTAL. CHIP	15MF	20%	4V
C57	1-164-156-11	CERAMIC CHIP	0.1MF		25V
C58	1-162-964-11	CERAMIC CHIP	0.001MF	10%	50V
C59	1-164-156-11	CERAMIC CHIP	0.1MF		25V
C60	1-162-995-11	CERAMIC CHIP	0.022MF		50V
C61	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C62	1-162-9[illegible]-11	CERAMIC CHIP	0.0022MF	10%	50V
C63	1-162-966-11	(ET,AUS)...CERAMIC CHIP	0.0022MF	10%	50V
C64	1-162-966-11	(ET,AUS)...CERAMIC CHIP	0.0022MF	10%	50V
C65	1-162-974-11	(ET,AUS)...CERAMIC CHIP	0.01MF		50V
C66	1-162-974-11	(ET,AUS)...CERAMIC CHIP	0.01MF		50V
C67	1-135-158-21	(ET,AUS)...TANTAL. CHIP	15MF	20%	4V

Ref.No.	Part No.	Description		
C68	1-135-151-21	TANTAL. CHIP 4.7MF	20%	4V
C69	1-135-151-21	TANTAL. CHIP 4.7MF	20%	4V
C70	1-162-995-11	CERAMIC CHIP 0.022MF		50V
C71	1-162-966-11	(ET,AUS)...CERAMIC CHIP 0.0022MF	10%	50V
C72	1-162-932-11	(ET,AUS)...CERAMIC CHIP 2PF	0.25PF	50V
C73	1-162-932-11	(ET,AUS)...CERAMIC CHIP 2PF	0.25PF	50V
C73	1-162-934-11	(AEP,UK)...CERAMIC CHIP 3PF	0.25PF	50V
C74	1-162-920-11	CERAMIC CHIP 27PF	10%	50V
C75	1-162-974-11	CERAMIC CHIP 0.01MF		50V
C76	1-162-974-11	CERAMIC CHIP 0.01MF		50V
C77	1-162-962-11	CERAMIC CHIP 470PF	10%	50V
C78	1-162-953-11	CERAMIC CHIP 100PF	5%	50V
C79	1-162-966-11	(ET,AUS)...CERAMIC CHIP 0.0022MF	10%	50V
C80	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V
C81	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V
C82	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V
C83	1-162-966-11	(ET,AUS)...CERAMIC CHIP 0.0022MF	10%	50V
C84	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V
C85	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V
C86	1-135-151-21	TANTAL. CHIP 4.7MF	20%	4V
C87	1-162-964-11	(AEP,UK,US) ...CERAMIC CHIP 0.001MF	10%	50V
C88	1-162-947-11	CERAMIC CHIP 33PF	5%	50V
C101	1-164-145-11	CERAMIC CHIP 390PF	5%	50V
C102	1-164-145-11	CERAMIC CHIP 390PF	5%	50V
C103	1-162-953-11	CERAMIC CHIP 100PF	5%	50V
C104	1-162-953-11	CERAMIC CHIP 100PF	5%	50V
C105	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C106	1-162-969-11	CERAMIC CHIP 0.0068MF	10%	25V
C107	1-135-222-11	TANTAL. CHIP 33MF	20%	2.5V
C108	1-135-177-21	TANTAL. CHIP 1MF	20%	20V
C110	1-162-967-11	CERAMIC CHIP 0.0033MF	5%	50V
C111	1-164-174-11	CERAMIC CHIP 0.0082MF	10%	25V
C112	1-135-177-21	TANTAL. CHIP 1MF	20%	20V
C113	1-162-970-11	CERAMIC CHIP 0.01MF	5%	25V
C114	1-135-192-21	TANTAL. CHIP 0.47MF	20%	20V
C115	1-135-151-21	TANTAL. CHIP 4.7MF	20%	4V
C116	1-135-177-21	(F702)...TANTAL. CHIP 1MF	20%	20V
C117	1-162-963-11	CERAMIC CHIP 680PF	10%	50V
C118	1-162-968-11	CERAMIC CHIP 0.0047MF	10%	50V
C119	1-135-218-11	TANTAL. CHIP 4.7MF		4V
C120	1-135-218-11	TANTAL. CHIP 4.7MF		4V
C121	1-135-177-21	TANTAL. CHIP 1MF	20%	20V
C201	1-164-145-11	CERAMIC CHIP 390PF	5%	50V
C202	1-164-145-11	CERAMIC CHIP 390PF	5%	50V
C203	1-162-953-11	CERAMIC CHIP 100PF	5%	50V
C204	1-162-953-11	CERAMIC CHIP 100PF	5%	50V
C205	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C206	1-162-969-11	CERAMIC CHIP 0.0068MF	10%	25V
C207	1-135-222-11	TANTAL. CHIP 33MF	20%	2.5V
C208	1-135-209-11	TANTAL. CHIP 1MF	20%	10V
C210	1-162-967-11	CERAMIC CHIP 0.0033MF	5%	50V
C211	1-164-174-11	CERAMIC CHIP 0.0082MF	10%	25V
C212	1-135-208-11	TANTAL. CHIP 1MF	20%	10V
C213	1-162-970-11	CERAMIC CHIP 0.01MF	5%	25V

Ref.No.	Part No.	Description		
C214	1-135-192-21	TANTAL. CHIP 0.47MF	20%	20V
C215	1-135-218-11	TANTAL. CHIP 4.7MF		4V
C216	1-135-177-21	(F702)...TANTAL. CHIP 1MF	20%	20V
C217	1-162-963-11	CERAMIC CHIP 680PF	10%	50V
C218	1-162-968-11	CERAMIC CHIP 0.0047MF	10%	50V
C219	1-135-218-11	TANTAL. CHIP 4.7MF		4V
C220	1-135-151-21	TANTAL. CHIP 4.7MF	20%	4V
C221	1-135-208-11	TANTAL. CHIP 1MF	20%	10V
C301	1-135-158-21	TANTAL. CHIP 15MF	20%	4V
C303	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V
C304	1-135-158-21	TANTAL. CHIP 15MF	20%	4V
C305	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V
C306	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V
C307	1-162-964-11	CERAMIC CHIP 0.001MF	10%	50V
C308	1-135-158-21	TANTAL. CHIP 15MF	20%	4V
C309	1-135-170-21	(F702)...TANTAL. CHIP 6.8MF	20%	4V
C310	1-135-180-21	TANTAL. CHIP 3.3MF	20%	6.3V
C311	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C312	1-135-221-11	TANTAL. CHIP 3.3MF	20%	4V
C313	1-135-221-11	TANTAL. CHIP 3.3MF	20%	4V
C314	1-135-221-11	TANTAL. CHIP 3.3MF	20%	4V
C315	1-162-970-11	CERAMIC CHIP 0.01MF	5%	25V
C316	1-164-156-11	CERAMIC CHIP 0.1MF		25V
C317	1-162-968-11	CERAMIC CHIP 0.0047MF	10%	50V
C318	1-135-177-21	TANTAL. CHIP 1MF	20%	20V
C319	1-135-158-21	TANTAL. CHIP 15MF	20%	4V
C320	1-135-218-11	TANTAL. CHIP 4.7MF		4V
C321	1-135-158-21	TANTAL. CHIP 15MF	20%	4V
C322	1-162-955-11	CERAMIC CHIP 150PF	5%	50V
C323	1-164-156-11	CERAMIC CHIP 0.1MF		25V
C324	1-135-158-21	TANTAL. CHIP 15MF	20%	4V
C325	1-135-221-11	TANTAL. CHIP 3.3MF	20%	4V
C327	1-135-219-11	(F702)...TANTAL. CHIP 15MF	20%	25V
C330	1-135-221-11	TANTAL. CHIP 3.3MF	20%	4V
C332	1-164-156-11	(F702)...CERAMIC CHIP 0.1MF		25V
C601	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C602	1-163-833-00	CERAMIC CHIP 0.068MF		25V
C603	1-164-489-11	CERAMIC CHIP 0.22MF	10%	16V
C604	1-135-091-00	TANTAL. CHIP 1MF	20%	16V
C605	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C606	1-135-145-11	TANTAL. CHIP 0.47MF	20%	25V
C607	1-135-073-00	TANTAL. CHIP 0.33MF	20%	35V
C701	1-135-192-21	TANTAL. CHIP 0.47MF	20%	20V
C708	1-162-970-11	CERAMIC CHIP 0.01MF	5%	25V
C709	1-135-208-11	TANTAL. CHIP 1MF	20%	10V
C710	1-135-190-21	TANTAL. CHIP 0.1MF	20%	20V
C711	1-162-957-11	CERAMIC CHIP 220PF	5%	50V
C712	1-162-957-11	CERAMIC CHIP 220PF	5%	50V
C713	1-164-346-11	CERAMIC CHIP 1MF		16V
C714	1-162-970-11	CERAMIC CHIP 0.01MF	5%	25V
C715	1-164-156-11	CERAMIC CHIP 0.1MF		25V
C716	1-135-218-11	TANTAL. CHIP 4.7MF		4V
C801	1-135-219-11	TANTAL. CHIP 15MF	20%	25V
C802	1-162-969-11	CERAMIC CHIP 0.0068MF	10%	25V
C803	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C804	1-135-158-21	TANTAL. CHIP 15MF	20%	4V
C805	1-135-158-21	TANTAL. CHIP 15MF	20%	4V

Ref.No.	Part No.	Description
C806	1-135-170-21	TANTAL. CHIP 6.8MF 20% 4V
C807	1-162-636-11	(F702)...CERAMIC CHIP 1MF 16V
C808	1-162-638-11	(F702)...CERAMIC CHIP 1MF 16V
CF1	1-577-129-11	(F702)...FILTER, CRYSTAL (10.75MHz)
CF2	1-577-129-11	(F702)...FILTER, CRYSTAL (10.75MHz)
CF3	1-567-920-21	(F702)...FILTER, CERAMIC
CT1	1-141-327-11	(F702:ET,AUS)...CAP, VAR, TRIMMER (CHIP TYPE)
CT2	1-141-327-11	(F702)...CAP, VAR, TRIMMER (CHIP TYPE)
CT3	1-141-327-11	(F702)...CAP, VAR, TRIMMER (CHIP TYPE)
CT4	1-141-327-11	(F702)...CAP, VAR, TRIMMER (CHIP TYPE)
	D1-D13:WM-F702 ONLY	
D1	8-719-981-25	(ET,AUS)...DIODE KV1450
D2	8-719-981-25	(ET,AUS)...DIODE KV1450
D3	8-719-981-25	DIODE KV1450
D4	8-719-981-25	DIODE KV1450
D5	8-719-951-05	DIODE KV1560
D6	8-719-404-32	(ET,AUS)...DIODE MA141WA
D7	8-719-106-62	DIODE RD11M-B2
D8	8-719-404-35	DIODE MA141WK
D9	8-719-404-46	DIODE MA110
D10	8-719-404-46	(ET,AUS)...DIODE MA110
D11	8-719-938-75	DIODE SB05-05CP
D12	8-719-404-46	(AEP,UK,US)...DIODE MA110
D13	8-719-404-46	(AEP,UK)...DIODE MA110
D701	8-719-404-46	DIODE MA110
D702	8-719-974-55	DIODE GL102R6
D703	8-719-404-46	DIODE MA110
D704	8-719-404-46	DIODE MA110
D801	8-719-938-75	DIODE SB05-05CP
D802	8-719-420-51	DIODE MA729
D803	8-719-975-06	DIODE CL-70G-CD (LED)
D804	8-719-404-46	DIODE MA110
FL1	1-236-305-11	(F702:ET,AUS).....FILTER, BAND PASS
FL1	1-236-504-11	(F702:AEP,UK,US)...FILTER, BAND PASS
HP901	1-543-702-11	HEAD, MAGNETIC (PLAYBACK)
IC1	8-759-206-38	(F702:ET,AUS)...IC TA7358F-N
IC2	8-752-011-10	(F702)...IC CX20111
IC3	8-759-945-89	(F702)...IC BA1362FS
IC4	8-759-113-84	(F702:ET,AUS)...IC UPB558G
IC5	8-759-984-04	(F702).....IC SCI7700YNA
IC6	8-759-142-67	(F702).....IC UPD1715G-566-24
IC101	8-759-230-91	IC TA7795FN
IC102	8-759-230-88	IC TA7793FN
IC103	8-759-711-24	IC NJM2106M
IC104	8-759-231-13	IC TA8145FN
IC601	8-759-986-13	IC TLP326ADP
IC701	8-759-503-21	IC MSM6404A-294GS-K
IC702	8-752-039-05	IC CXA1405M
J701	1-568-121-13	JACK
	JR1-JR13:WM-F702 ONLY	
JR1	1-216-864-11	METAL GLAZE 0 5% 1/16W
JR2	1-216-864-11	(ET,AUS)...METAL GLAZE 0 5% 1/16W
JR3	1-216-864-11	METAL GLAZE 0 5% 1/16W
JR4	1-216-864-11	METAL GLAZE 0 5% 1/16W
JR6	1-216-864-11	METAL GLAZE 0 5% 1/16W
JR7	1-216-864-11	(ET,AUS)...METAL GLAZE 0 5% 1/16W

Ref.No.	Part No.	Description
JR8	1-216-864-11	METAL GLAZE 0 5% 1/16W
JR9	1-216-864-11	METAL GLAZE 0 5% 1/16W
JR11	1-216-864-11	METAL GLAZE 0 5% 1/16W
JR12	1-216-864-11	METAL GLAZE 0 5% 1/16W
JR13	1-216-864-11	(AEP,UK,US)...METAL GLAZE 0 5% 1/16W
JR101	1-216-295-00	(702)...METAL GLAZE 0 5% 1/10W
JR201	1-216-295-00	(702)...METAL GLAZE 0 5% 1/10W
JR301	1-216-295-00	(702)...METAL GLAZE 0 5% 1/10W
JR701	1-216-295-00	(702)...METAL GLAZE 0 5% 1/10W
JR702	1-216-295-00	(702)...METAL GLAZE 0 5% 1/10W
JR703	1-216-295-00	(702)...METAL GLAZE 0 5% 1/10W
JR704	1-216-295-00	(702)...METAL GLAZE 0 5% 1/10W
JR705	1-216-295-00	(702)...METAL GLAZE 0 5% 1/10W
JR706	1-216-295-00	(702)...METAL GLAZE 0 5% 1/10W
JR707	1-216-295-00	(702)...METAL GLAZE 0 5% 1/10W
L1	1-459-624-11	(ET,AUS)...COIL (WITH CORE)
L2	1-459-943-21	(ET,AUS)...COIL (WITH CORE)
L3	1-459-590-11	COIL (WITH CORE)
L4	1-459-564-11	(ET,AUS).....COIL (WITH CORE)
L4	1-459-590-11	(AEP,UK,US)...COIL (WITH CORE)
L5	1-412-002-31	(ET,AUS)...INDUCTOR CHIP 4.7UH
L7	1-412-002-31	INDUCTOR CHIP 4.7UH
L8	1-402-282-11	ANTENNA, FERRITE-ROD (WM)
L9	1-412-006-31	INDUCTOR CHIP 10UH
L101	1-410-997-31	(F702)...INDUCTOR CHIP 2.2UH
L201	1-410-997-31	(F702)...INDUCTOR CHIP 2.2UH
L301	1-410-997-31	(F702)...INDUCTOR CHIP 2.2UH
L701	1-410-997-31	(F702)...INDUCTOR CHIP 2.2UH
L702	1-410-997-31	(F702)...INDUCTOR CHIP 2.2UH
L703	1-410-997-31	(F702)...INDUCTOR CHIP 2.2UH
L704	1-410-997-31	(F702)...INDUCTOR CHIP 2.2UH
L705	1-410-997-31	(F702)...INDUCTOR CHIP 2.2UH
L706	1-410-997-31	(F702)...INDUCTOR CHIP 2.2UH
L707	1-410-997-31	(F702)...INDUCTOR CHIP 2.2UH
L801	1-412-148-11	(F702)...INDUCTOR CHIP 56UH
L802	1-410-213-51	(F702)...INDUCTOR CHIP 56UH
L803	1-410-213-51	(F702)...INDUCTOR CHIP 56UH
LCD1	1-808-578-11	(F702)...DISPLAY PANEL, LIQUID CRYSTAL
M901	1-541-715-11	MOTOR
MF1	1-577-261-21	(F702)...FILTER, CERAMIC
PH701	8-759-710-35	DIODE, PHOTO NJL5161K-B
PM1	1-454-490-21	SOLENOID, PLUNGER
	Q1-Q27:WM-F702 ONLY	
Q1	8-729-117-73	TRANSISTOR 2SC4178-F14
Q2	8-729-117-73	(ET,AUS)...TRANSISTOR 2SC4178-F14
Q3	8-729-117-73	(ET,AUS)...TRANSISTOR 2SC4178-F14
Q4	8-729-402-16	(ET,AUS)...TRANSISTOR XN4608
Q5	8-729-117-73	TRANSISTOR 2SC4178-F14
Q6	8-729-117-73	TRANSISTOR 2SC4178-F14
Q7	8-729-420-44	TRANSISTOR UN5210
Q8	8-729-807-87	(ET,AUS)...TRANSISTOR 2SB1295-UL6
Q9	8-729-620-12	TRANSISTOR 2SC4154EF

Ref.No.	Part No.	Description
Q10	8-729-403-17	TRANSISTOR XN1215
Q11	8-729-402-16	TRANSISTOR XN4608
Q12	8-729-220-93	TRANSISTOR 2SK209-G
Q13	8-729-620-12	TRANSISTOR 2SC4154EF
Q14	8-729-220-93	TRANSISTOR 2SK209-G
Q15	8-729-620-12	TRANSISTOR 2SC4154EF
Q16	8-729-620-12	TRANSISTOR 2SC4154EF
Q17	8-729-807-87	TRANSISTOR 2SB1295-UL6
Q18	8-729-807-87	(ET,AUS)...TRANSISTOR 2SB1295-UL6
Q19	8-729-402-96	(ET,AUS)...TRANSISTOR UN5114
Q20	8-729-420-53	TRANSISTOR UN5115
Q21	8-729-420-53	TRANSISTOR UN5115
Q23	8-729-920-41	TRANSISTOR FMC3
Q24	8-729-402-96	TRANSISTOR UN5114
Q25	8-729-420-44	TRANSISTOR UN5210
Q26	8-729-220-93	TRANSISTOR 2SK209-G
Q27	8-729-421-83	TRANSISTOR UN5210-RS
Q301	8-729-100-66	(F702)...TRANSISTOR 2SC1623
Q302	8-729-420-50	TRANSISTOR UN5215
Q303	8-729-402-16	TRANSISTOR XN4608
Q304	8-729-230-72	TRANSISTOR 2SA1362-YG
Q305	8-729-420-50	(F702)...TRANSISTOR UN5215
Q306	8-729-402-81	(F702)...TRANSISTOR XN4501
Q307	8-729-117-16	(F702)...TRANSISTOR 2SA1611-M6
Q601	8-729-162-44	TRANSISTOR 2SB624-BV4
Q602	8-729-162-44	TRANSISTOR 2SB624-BV4
Q603	8-729-402-81	TRANSISTOR XN4501
Q701	8-729-403-42	TRANSISTOR XN1401
Q702	8-729-402-16	TRANSISTOR XN4608
Q706	8-729-402-16	TRANSISTOR XN4608
Q707	8-729-402-16	TRANSISTOR XN4608
Q708	8-729-422-54	TRANSISTOR XN4215
Q709	8-729-420-53	TRANSISTOR UN5115
Q710	8-729-403-17	TRANSISTOR XN1215
Q711	8-729-420-53	TRANSISTOR UN5115
Q712	8-729-402-16	TRANSISTOR XN4608
Q713	8-729-602-21	TRANSISTOR 2SC4154
Q714	8-729-420-53	TRANSISTOR UN5115
Q801	8-729-602-36	TRANSISTOR 2SA1602
Q802	8-729-602-21	TRANSISTOR 2SC4154
Q803	8-729-400-56	TRANSISTOR 2SD1328-T

R1-R79:WM-F702 ONLY

R1	1-216-853-11	(ET,AUS)...METAL GLAZE	470K	5%	1/16W
R2	1-216-853-11	(ET,AUS)...METAL GLAZE	470K	5%	1/16W
R3	1-216-853-11	METAL GLAZE	470K	5%	1/16W
R4	1-216-853-11	(ET,AUS)...METAL GLAZE	470K	5%	1/16W
R5	1-216-841-11	(ET,AUS)...METAL GLAZE	47K	5%	1/16W
R6	1-216-818-11	(ET,AUS)...METAL GLAZE	560	5%	1/16W
R7	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R8	1-216-841-11	(ET,AUS)...METAL GLAZE	47K	5%	1/16W
R9	1-216-823-11	(ET,AUS)...METAL GLAZE	1.5K	5%	1/16W
R10	1-216-830-11	(ET,AUS)...METAL GLAZE	5.6K	5%	1/16W
R11	1-216-823-11	METAL GLAZE	1.5K	5%	1/16W
R12	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R13	1-216-853-11	METAL GLAZE	470K	5%	1/16W
R14	1-216-853-11	METAL GLAZE	470K	5%	1/16W
R15	1-216-853-11	METAL GLAZE	470K	5%	1/16W
R16	1-216-853-11	METAL GLAZE	470K	5%	1/16W
R17	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R18	1-216-818-11	METAL GLAZE	560	5%	1/16W
R19	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R20	1-216-853-11	METAL GLAZE	470K	5%	1/16W
R21	1-216-809-11	METAL GLAZE	100	5%	1/16W
R22	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R23	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R24	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R25	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R26	1-216-839-11	METAL GLAZE	33K	5%	1/16W
R27	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R28	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R29	1-216-832-11	METAL GLAZE	8.2K	5%	1/16W
R30	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R31	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R32	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R33	1-216-807-11	METAL GLAZE	68	5%	1/16W
R34	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R35	1-216-842-11	METAL GLAZE	56K	5%	1/16W
R36	1-216-830-11	METAL GLAZE	5.6K	5%	1/16W
R37	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R38	1-216-828-11	METAL GLAZE	3.9K	5%	1/16W
R39	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R40	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R41	1-218-272-11	METAL GLAZE	5.1K	5%	1/16W
R42	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R43	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R44	1-216-803-11	(ET,AUS)...METAL GLAZE	33	5%	1/16W
R45	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R48	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R49	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R50	1-216-830-11	METAL GLAZE	5.6K	5%	1/16W
R51	1-216-830-11	METAL GLAZE	5.6K	5%	1/16W
R52	1-216-830-11	METAL GLAZE	5.6K	5%	1/16W
R53	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R54	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R55	1-218-272-11	(ET,AUS)...METAL GLAZE	5.1K	5%	1/16W
R56	1-216-821-11	(ET,AUS)...METAL GLAZE	1K	5%	1/16W
R57	1-216-819-11	(ET,AUS)...METAL GLAZE	680	5%	1/16W
R58	1-218-272-11	(ET,AUS)...METAL GLAZE	5.1K	5%	1/16W
R59	1-216-841-11	(ET,AUS)...METAL GLAZE	47K	5%	1/16W
R60	1-216-853-11	(ET,AUS)...METAL GLAZE	470K	5%	1/16W
R61	1-216-821-11	(ET,AUS)...METAL GLAZE	1K	5%	1/16W
R62	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R63	1-216-853-11	METAL GLAZE	470K	5%	1/16W
R64	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R65	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R66	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R67	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R68	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R69	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R70	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R71	1-216-853-11	(US)...METAL GLAZE	470K	5%	1/16W
R72	1-216-853-11	(AEP,UK,US) ...METAL GLAZE	470K	5%	1/16W
R73	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R74	1-216-833-11	(US)...METAL GLAZE	10K	5%	1/16W

Ref.No.	Part No.	Description
R75	1-216-830-11	(AEP,UK,US) ...METAL GLAZE 5.6K 5% 1/16W
R76	1-216-845-11	(AEP,UK,US) ...METAL GLAZE 100K 5% 1/16W
R77	1-216-801-11	(ET,AUS)...METAL GLAZE 22 5% 1/16W
R79	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R101	1-216-837-11	METAL GLAZE 22K 5% 1/16W
R102	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R103	1-216-837-11	METAL GLAZE 22K 5% 1/16W
R104	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R105	1-216-845-11	METAL GLAZE 100K 5% 1/16W
R106	1-216-825-11	METAL GLAZE 2.2K 5% 1/16W
R107	1-216-824-11	METAL GLAZE 1.8K 5% 1/16W
R108	1-216-854-11	METAL GLAZE 560K 5% 1/16W
R109	1-218-292-11	METAL GLAZE 20K 5% 1/16W
R110	1-216-817-11	METAL GLAZE 470 5% 1/16W
R111	1-216-842-11	METAL GLAZE 56K 5% 1/16W
R112	1-216-839-11	METAL GLAZE 33K 5% 1/16W
R120	1-216-839-11	METAL GLAZE 33K 5% 1/16W
R121	1-216-994-11	METAL GLAZE 13K 5% 1/16W
R122	1-216-852-11	METAL GLAZE 390K 5% 1/16W
R123	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R125	1-216-829-11	METAL GLAZE 4.7K 5% 1/16W
R126	1-216-845-11	METAL GLAZE 100K 5% 1/16W
R127	1-218-292-11	METAL GLAZE 20K 5% 1/16W
R130	1-216-791-11	METAL GLAZE 3.3 5% 1/16W
R201	1-216-837-11	METAL GLAZE 22K 5% 1/16W
R202	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R203	1-216-837-11	METAL GLAZE 22K 5% 1/16W
R204	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R205	1-216-845-11	METAL GLAZE 100K 5% 1/16W
R206	1-216-825-11	METAL GLAZE 2.2K 5% 1/16W
R207	1-216-824-11	METAL GLAZE 1.8K 5% 1/16W
R208	1-216-854-11	METAL GLAZE 560K 5% 1/16W
R209	1-218-292-11	METAL GLAZE 20K 5% 1/16W
R210	1-216-817-11	METAL GLAZE 470 5% 1/16W
R211	1-216-842-11	METAL GLAZE 56K 5% 1/16W
R212	1-216-839-11	METAL GLAZE 33K 5% 1/16W
R220	1-216-839-11	METAL GLAZE 33K 5% 1/16W
R221	1-216-994-11	METAL GLAZE 13K 5% 1/16W
R222	1-216-852-11	METAL GLAZE 390K 5% 1/16W
R223	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R225	1-216-829-11	(F702)...METAL GLAZE 4.7K 5% 1/16W
R226	1-216-845-11	(F702)...METAL GLAZE 100K 5% 1/16W
R227	1-218-292-11	METAL GLAZE 20K 5% 1/16W
R230	1-216-791-11	METAL GLAZE 3.3 5% 1/16W

Ref.No.	Part No.	Description
R301	1-216-853-11	METAL GLAZE 470K 5% 1/16W
R302	1-216-836-11	METAL GLAZE 18K 5% 1/16W
R303	1-216-839-11	METAL GLAZE 33K 5% 1/16W
R305	1-216-829-11	METAL GLAZE 4.7K 5% 1/16W
R307	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R308	1-216-845-11	METAL GLAZE 100K 5% 1/16W
R309	1-216-791-11	METAL GLAZE 3.3 5% 1/16W
R310	1-216-841-11	METAL GLAZE 47K 5% 1/16W
R311	1-216-839-11	METAL GLAZE 33K 5% 1/16W
R312	1-216-845-11	METAL GLAZE 100K 5% 1/16W
R315	1-216-849-11	(F702)...METAL GLAZE 220K 5% 1/16W
R316	1-216-837-11	(F702)...METAL GLAZE 22K 5% 1/16W
R317	1-216-845-11	METAL GLAZE 100K 5% 1/16W
R319	1-216-845-11	(F702)...METAL GLAZE 100K 5% 1/16W
R325	1-216-833-11	(F702)...METAL GLAZE 10K 5% 1/16W
R326	1-216-841-11	(F702)...METAL GLAZE 47K 5% 1/16W
R327	1-216-854-11	(F702)...METAL GLAZE 560K 5% 1/16W
R328	1-216-841-11	(F702)...METAL GLAZE 47K 5% 1/16W
R601	1-216-849-11	METAL GLAZE 220K 5% 1/16W
R602	1-216-845-11	METAL GLAZE 100K 5% 1/16W
R603	1-216-835-11	METAL GLAZE 15K 5% 1/16W
R604	1-216-791-11	METAL GLAZE 3.3 5% 1/16W
R605	1-216-809-11	METAL GLAZE 100 5% 1/16W
R606	1-216-809-11	METAL GLAZE 100 5% 1/16W
R607	1-216-851-11	METAL GLAZE 330K 5% 1/16W
R608	1-216-833-11	METAL GLAZE 10K 5% 1/16W
R609	1-216-831-11	METAL GLAZE 6.8K 5% 1/16W
R610	1-216-212-00	METAL GLAZE 3.9K 5% 1/8W
R701	1-216-651-11	METAL CHIP 1K 0.50% 1/10W
R702	1-216-651-11	METAL CHIP 1K 0.50% 1/10W
R703	1-216-658-11	METAL CHIP 2K 0.50% 1/10W
R704	1-216-665-11	METAL CHIP 3.9K 0.50% 1/10W
R705	1-216-672-11	METAL CHIP 7.5K 0.50% 1/10W
R706	1-216-651-11	METAL CHIP 1K 0.50% 1/10W
R707	1-216-668-11	METAL CHIP 5.1K 0.50% 1/10W
R708	1-216-839-11	METAL GLAZE 33K 5% 1/16W
R709	1-216-857-11	METAL GLAZE 1M 5% 1/16W
R710	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R711	1-216-845-11	METAL GLAZE 100K 5% 1/16W
R712	1-216-821-11	METAL GLAZE 1K 5% 1/16W
R713	1-218-292-11	METAL GLAZE 20K 5% 1/16W
R714	1-216-837-11	METAL GLAZE 22K 5% 1/16W
R715	1-216-841-11	METAL GLAZE 47K 5% 1/16W
R716	1-216-841-11	METAL GLAZE 47K 5% 1/16W
R717	1-216-816-11	METAL GLAZE 390 5% 1/16W

Ref.No.	Part No.	Description			
R718	1-216-816-11	METAL GLAZE	390	5%	1/16W
R719	1-216-816-11	METAL GLAZE	390	5%	1/16W
R720	1-216-816-11	METAL GLAZE	390	5%	1/16W
R721	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R723	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R724	1-216-816-11	METAL GLAZE	390	5%	1/16W
R725	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R726	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R727	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R728	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R729	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R730	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R731	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R734	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R735	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R736	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R737	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R738	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R739	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W
R801	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R803	1-216-800-11	METAL GLAZE	18	5%	1/16W
R804	1-216-814-11	METAL GLAZE	270	5%	1/16W
R805	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R806	1-216-809-11	METAL GLAZE	100	5%	1/16W
RV1	1-237-927-11	(F702)...RES, ADJ, CERMET 10K (VCO)			
RV301	1-238-429-11	RES, VAR, CARBON 10K/10K (VOL)			
RV601	1-238-203-11	RES, ADJ, METAL GLAZE 4.7K (SPEED)			
S1	1-571-533-31	(F702)...SWITCH, KEY BOARD (RADIO ON/BAND)			
S2	1-571-533-31	(F702)...SWITCH, KEY BOARD (PRESET TUNE)			
S3	1-570-204-21	(F702)...SWITCH, KEY BOARD (SCAN +)			
S4	1-570-204-21	(F702)...SWITCH, KEY BOARD (SCAN -)			
S5	1-570-204-21	(F702)...SWITCH, KEY BOARD (ENTER)			
S6	1-571-275-11	(F702)...SWITCH, SLIDE (FM MODE)			
S301	1-571-275-11	SWITCH, SLIDE (TAPE)			
S302	1-571-275-11	SWITCH, SLIDE (DOLBY)			
S303	1-571-275-11	SWITCH, SLIDE (MODE)			
S701	1-571-506-11	SWITCH, SLIDE (DBB)			
S702	1-571-584-11	SWITCH, SLIDE (HEAD SW)			
S703	1-570-395-11	SWITCH, LEAF (PLAY)			

Ref.No.	Part No.	Description
T1	1-404-690-11	(F702)...TRANSFORMER, IF (AM IFT)
T2	1-406-177-11	(F702)...COIL (AM OSC)
T3	1-449-021-21	(F702)...TRANSFORMER, DC-DC CONVERTER
T801	1-449-543-11	TRANSFORMER, DC-DC CONVERTER
X1	1-577-262-11	(F702)...VIBRATOR, CRYSTAL (75kHz)
X701	1-577-700-11	VIBRATOR, CERAMIC

ACCESSORY & PACKING MATERIAL

1-505-108-11	(702:E).....HEAD SET (MDR-E472RVS)
1-505-109-11	(F702:ET,AUS).....HEAD SET (MDR-E472RVT)
1-505-111-11	(702:AEP,UK).....HEAD SET (MDR-A20RU1)
1-505-112-11	(F702:AEP,UK,US)...HEAD SET (MDR-A20RU5)
⚠1-526-565-00	(F702:ET/702:E)...AC PLUG ADAPTOR
1-528-231-11	(EXCEPT AUS)...BATTERY, NICKEL CADMIUM (NC-6WM)
⚠1-528-234-11	(702:E/F702:ET)...BATTERY CHARGER(BC-7L)
⚠1-528-251-11	(AEP)...BATTERY CHARGER (BC-7S)
⚠1-528-252-11	(UK)....BATTERY CHARGER (BC-7S)
⚠1-528-321-11	(US)....BATTERY CHARGER (BC-7AU)
1-550-460-11	BATTERY CASE
1-568-133-11	ADAPTOR, PLUG
3-357-706-01	CASE, CARRYING
*3-357-720-01	CUSHION (UPPER)
*3-357-725-01	CUSHION (LOWER)
*3-357-723-01	(702:E).....INDIVIDUAL CARTON
*3-357-726-01	(F702:ET,AUS)...INDIVIDUAL CARTON
*3-357-734-01	(702:AEP,UK)....INDIVIDUAL CARTON
*3-357-735-01	(F702:AEP,UK)...INDIVIDUAL CARTON
*3-357-736-01	(F702:US).....INDIVIDUAL CARTON
3-751-221-11	(702:AEP,UK,E)...MANUAL, INSTRUCTION (Eng./F./Sp./Port.)
3-751-221-41	(702:AEP).....MANUAL, INSTRUCTION (Ger./D./Swed./It.)
3-751-222-11	(F702:AEP,UK)...MANUAL, INSTRUCTION (Eng./F.)
3-751-222-21	(F702:US).....MANUAL, INSTRUCTION (Eng.)
3-751-222-41	(F702:AEP).....MANUAL, INSTRUCTION (Sp./Port.)
3-751-222-51	(F702:AEP).....MANUAL, INSTRUCTION (Ger./D.)
3-751-222-61	(F702:AEP).....MANUAL, INSTRUCTION (Swed./It.)
3-751-222-71	(F702:ET,AUS)...MANUAL, INSTRUCTION (Jap./Eng.)
X-3329-657-1	ATTACHMENT ASSY

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

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WM-702/F702

SONY

SERVICE MANUAL

US Model
Canadian Model
WM-F702

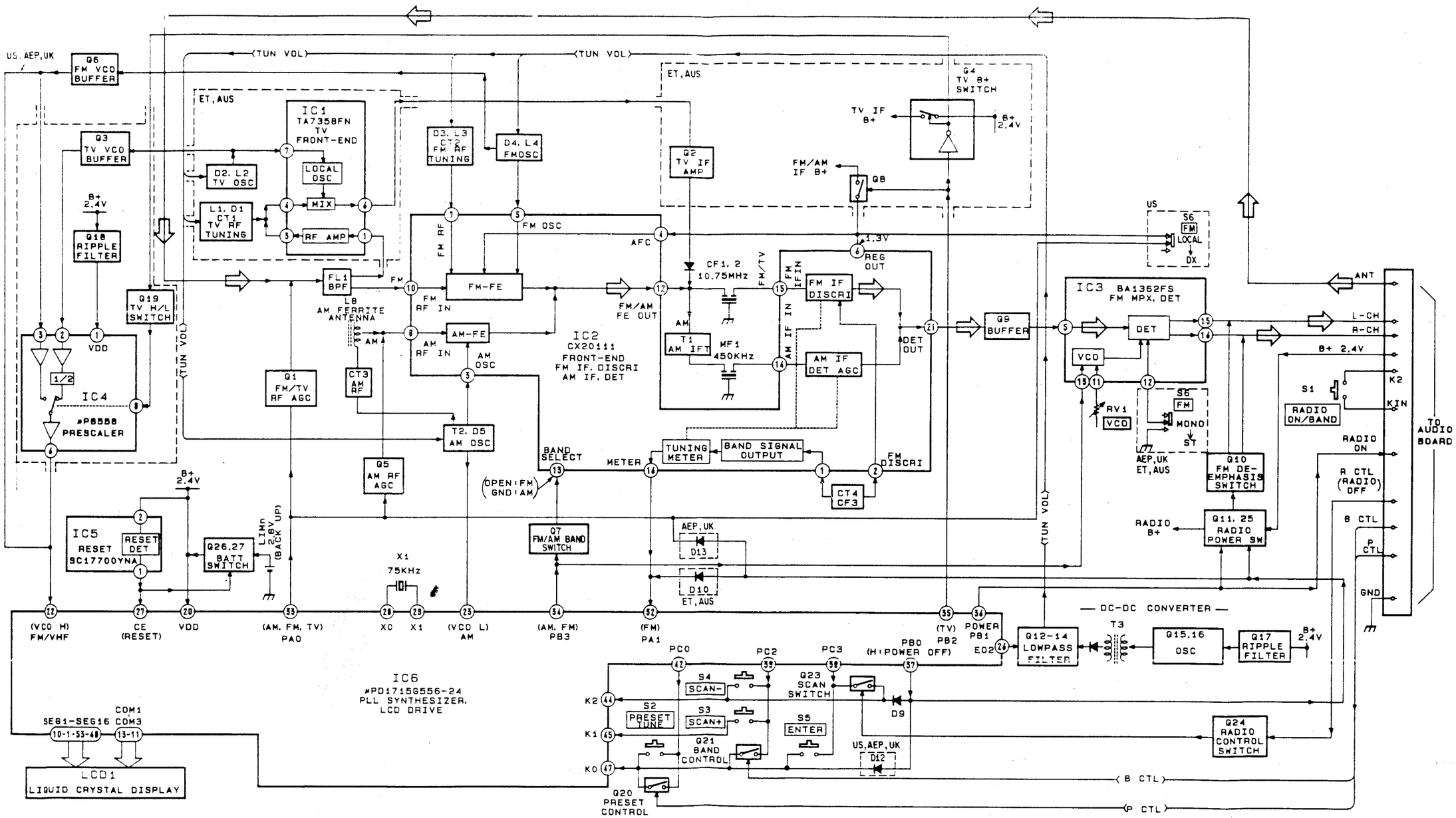
AEP Model
UK Model
E Model
WM-702
WM-F702

SUPPLEMENT-1

File this Supplement with the Service Manual.

1. Radio Section Block diagram
2. Correction
3. IC Terminals
4. Cassette Section Block Diagram

1. RADIO SECTION BLOCK DIAGRAM



- Signal path.
  ⇨ : FM
- CND : Canadian model
  AUS : Australian model

2. CORRECTION

Please correct your service manual.

☛: corrected portion

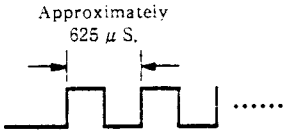
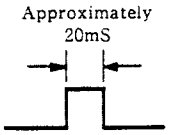
Page	Incorrect	Correct
1	Note : AUS : Austrarian model	Note : AUS : Australian model
20 • 23	Ref. No. Part No. Description 902 A-3215-838-A (702) ••• MOUNTED PCB, SYSTEM CONTROL	Ref. No. Part No. Description 902 A-3015-838-A (702) ••• MOUNTED PCB, SYSTEM CONTROL

3. IC TERMINALS

- **IC701 System Controller (MSM6404A)**

  This controller turns ON/OFF of the DDC, motor, plunger, redio, and LED and performs tape end detection, mute control, etc., according to the input from each switch.

No	Signal	I/O	Function
1	$\overline{\text{LED2}}$	–	Reverse LED output of remote controller. "L" : Lights.
2	$\overline{\text{FWD LED}}$	O	Forward LED output of main unit. "L" : Lights.
3	$\overline{\text{REV LED}}$	O	Reverse LED output of main unit. "L" : Lights.
4	OSC O	O	Clock output.
5	OSC I	I	Clock input (500kHz).
6	$\overline{\text{RESET}}$	I	System reset input. "L" : Reset.
7	–	–	Not used for this unit.
8	$\overline{\text{WAKE UP}}$	I	Microcomputer start up and input when radio section is in operation. *2
9	END PULSE	I	Reel base rotation detection input. If the input voltage does not change for more than 1.6 seconds in play mode, it is judged as the end of tape.
10	HEAD	I	PLAY switch (S7030) input. "L" : PLAY(in status with the head base raised up).
11	FWD	I	Playing head FWD/REV selecting switch (S702) input. "L" : FWD, Open : REV.
12	MUTE	O	Mute output for IC103 (EXDBB). "H" : Mute.
13	A/B SW	I	A/B sides detection switch (S704) input. Not used for this unit. (Always GND).
14	–	–	Not used for this unit.
15	–	–	Not used for this unit.
16	GND	–	Power terminal (GND).
17	–	–	Not used for this unit.
18	$\overline{\text{PROG}}$	–	Not used for this unit. (Always GND).
19	R. CTL	O	When turning ON radio section : "H".
20	$\overline{\text{B. CTL}}$	O	When pressing RADIO ON/BAND of the remote controller : "L".
21	$\overline{\text{P. CTL}}$	O	When pressing PRESET TUNE of the remote controller : "L".
22	–	–	Not used for this unit.

No	Signal	I/O	Function
23	BEEP	O	BEEP sound to IC104 (Head amp) output. 
24	–	–	Not used for this unit.
25	PM	O	Plunger (PM1) ON/OFF control output. This sends a lead-in pulse in FWD mode and two lead-in pulses in REV mode to plunger. 
26	M. CTL	O	Motor rotation ON/OFF control output. "H" : Rotate, "L" : Stop.
27	$\overline{\text{M. BRK}}$	O	Motor brake output. "L" : Brake.
28	$\overline{\text{M. DIR}}$	O	Motor rotation direction control output. "H" : Clockwise, "L" : Counterclockwise.
29	DDC CTL	O	DC-DC converter (DDC) control output. Set this port to "H" to keep DDC ON when DDC starts up and the microcomputer starts operation by pressing the switch of the main unit or the remote controller. Furthermore, this port is set in "L" mode approximately eight seconds after pressing the STOP key, or when the operation has been stopped by shutting off the this port, the DCC is turned OFF.
30	–	–	Not used for this unit.
31	–	–	Not used for this unit.
32	–	–	Not used for this unit.
33	–	–	Not used for this unit.
34	DIR MODE	I	DIRECTION mode switch (S701A) input. "L" : [illegible], "H" : [illegible]
35	–	–	Not used for this unit.

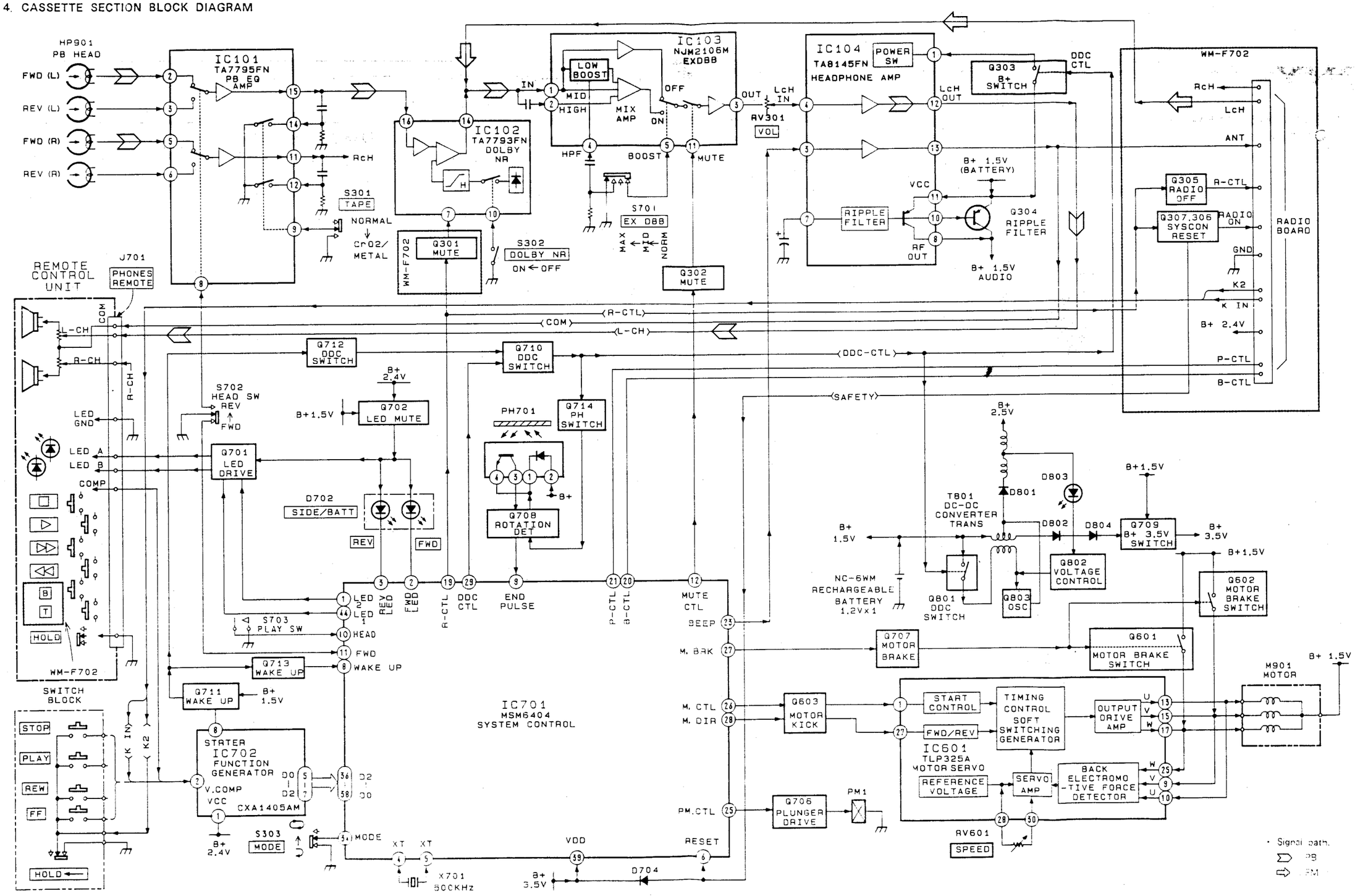
No	Signal	I/O	Function
36	D2	I	Key data from IC702(Comparation) input. *1
37	D1	I	
38	D0	I	
39	VDD	–	Power terminal (+3.5V).
40	–	–	Not used for this unit.
41	–	–	Not used for this unit.
42	–	–	Not used for this unit.
43	–	–	Not used for this unit.
44	$\overline{\text{LED1}}$	–	Remote controller forward LED output. "L" : Lights.

*1 3 bit data from IC702 (Comparator).

Switch input	D2	D1	D0
STOP	L	L	L
PLAY	L	L	H
REW	L	H	L
FF	L	H	H
RADIO ON/BAND	H	L	L
PRESET TUNE	H	L	H

*2 IC701 starts oscillation of the clock when $\overline{\text{WAKE UP}}$ is set in "L" mode by pressing the switch of the main unit or the remote controller while the radio section in ON.(The clock of IC701 is stopped while the radio section is in operation).

4. CASSETTE SECTION BLOCK DIAGRAM



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